Lectures ON HOSPITALISM, AND THE CAUSES WHICH DETERMINE THE MORTALITY AFTER AMPUTATIONS.

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LECTURE III.

GENTLEMEN,—By overcrowding a condition of the atmosphere will be induced which may, according to the condition of the individuals so congregated together, produce diseases of various types. The overcrowding of uninjured individuals will produce some varieties of typhus. The "gaol fever" of a past generation is an instance of this kind. The overcrowding of wounded people, whether the wound be accidental or surgical matters not, will develop septic disease in one of four forms—namely, hospital gangrene, septicæmia, pyæmia, or erysipelas. That the septic poison which, when once generated, impregnates a wound, and thus gives rise to hospital gangrene, pyæmia, or erysipelas, is capable of transmission through the medium of the atmosphere is undoubted. That it may be generated in the air by overcrowding is equally certain. The results of the most extended and recent observations on the development of this scourge of hospitals in actual warfare, which have of late years been numerous, have left no doubt whatever on the minds of military surgeons that overcrowding is the direct occasion of the whole class of surgical septic diseases. But the word "overcrowding" is liable to misconception, and requires explanation. It is very important to be clear on this point, for by it is not meant the mere heaping together of sick and wounded in one ward or building beyond what it is intended to hold, or only limited by its size; but by "overcrowding," in the sense in which it is here used as the cause of the generation of the septic poison, is meant the accumulation within one ward or under one roof of a greater number of patients than is compatible with such a degree of purity of air as to render it incapable of the development or transmission of the septic poison. It would, in fact, appear that the air of a ward is capable of oxidising and destroying or absorbing a certain amount of morbid emanations from the contained patients; but if these emanations are developed too rapidly or too abundantly the air becomes overcharged with septic matters, and then all the ill-effects of overcrowding at once develop themselves. The contamination of the air of a ward may thus take place even though the actual number of patients lying in it be below what it is constructed to hold, as readily as by the introduction of one single patient beyond the number that the ward is calculated to accommodate with safety. Thus it would be more correct to say that the evil effects of overcrowding, and the special form of disease it will occasion, are rather dependent on the nature than on the actual number of the cases that are contained in any given ward or building at one time. There is no evidence that an accumulation of unwounded patients to any extent can develop hospital gangrene or pyæmia, whatever other disease may thus be generated. Pyæmia could not have been generated in the Black Hole of Calcutta; but a very trifling excess of the number of open suppurating wounds beyond what any given ward is capable of holding with safety constitutes overcrowding in a surgical sense, and will invariably generate septic disease.

I can illustrate this observation from what has happened in this hospital. Ward No. 1, my male Accident Ward, contains a cubic space of 21,924 feet. It is intended to hold fourteen beds, giving a cubic space of 1566 feet to each, or if we deduct the space occupied by furniture, &c., about 1500 cubic feet. But not only is the cubic space sufficient, the floor space is also ample. There is about 6 feet between each bed, and 10 feet between the opposite rows of beds, the ward being 63 feet long by 24 broad. This ward can be well ventilated by a row of windows on each side, a fire-place at one end, and a large door with an open air-hole above, which, however, communicates with the general passages of the hospital at the other end. In this ward we have had many outbreaks of septic disease, pyæmia, and erysipelas, invariably the result of the accidental accumulation in it, not always of too large a number of patients, but of too many severe cases of operation and injury, with wounds in a state of suppuration. The average number of open wounds in this ward is about seven, or half the number of patients it contains, and if these wounds are not severe such a number can be contained in it with moderate safety; but if they rise above this number, or if the majority are severe, then septic disease will certainly break out. The outbreak in Ward No. 1, in November, 1872, which will be fully described hereafter, was produced in this way. The ward contained at the time a remarkably severe set of cases; in fact, the conclusion at which we have arrived is that if this ward contains nine or more cases of open wounds, at least three of which are severe, as amputation or similar cases, an outbreak of septic disease is imminent.

Thus, then, it is the nature of the cases, and not their number merely, that constitutes the danger of the development of surgical septic disease by so-called overcrowding. Doubtless epidemic influences favour the development of these septic outbreaks that are directly produced by overcrowding. In what these epidemic influences consist I know not. So far as my experience and observation go they are connected with very different meteorological conditions. In wet and in dry weather, in heat and cold, during prevalent easterly and westerly winds, they equally manifest themselves. The existence of these epidemic conditions, in addition to the influence of overcrowding, is evidenced by the admission from out of doors of erysipelatous cases and allied diseases, or by their appearance amongst the out-patients in unusual numbers. But the influence of different meteorological conditions on the development of epidemic septic diseases has yet to be worked out. In reality we know little or nothing that is positive about it. The influence of the season of the year is, however, somewhat better ascertained. Thus the observations of Dr. Hewson, of Philadelphia, that have already been referred to, point to the winter months as those in which pyæmia is more rife—an observation which has been in accordance with my own experience at University College Hospital for a lengthened period, where we have always suffered most from septic disease in the surgical wards during the winter and early spring months. This often appears to be owing, however, less to the direct influence of the season of the year than to its indirect effect in preventing ventilation, it being difficult in wet or cold weather to get the nurses or patients to submit to have the windows opened so as to allow an influx of fresh air in a constant current, and so prevent the ward being ventilated wholly from air drawn from the hospital corridors. The air-supply that is thus admitted from the corridors is already in a state of contamination.

Now what is this condition of contamination in hospital air that causes the development of septic disease in a ward, the cubic and floor space of which are sufficient, and which is kept scrupulously clean? That is the next point for inquiry. In the well-known, I may say celebrated, lecture by Prof. Tyndall on "Dust and Disease," that distinguished philosopher points out the important fact that the atmosphere under all circumstances contains floating particles of organic matter; that the motes which dance in the sunbeam are of this character. He states that the air of our London rooms is loaded with this organic dust, nor is the country air free from the pollution; and he goes on to observe that, however much it may disguise itself from ordinary observation, "a powerful beam of electric light causes the air in which the dust is suspended to appear as a semi-solid rather than as a gas. Nobody could in the first instance, without repugnance, place the mouth at the illuminated focus of the electric beam and inhale the dirt revealed there. Nor is the disgust abolished by the reflection, that although we do not see the nastiness, we are churning it in our lungs every hour and minute of our lives. There is no respite to this contact with dirt; and the wonder is, not that we should from time to time suffer from its presence, but that so small a portion of it would

appear to be deadly to man." Watts states that a minute quantity of organic matter, one grain in 200,000, is found in the present mountain air. This increases in the country at a lower level, and in large towns reaches the condition stated by Professor Tyndall in the above extract. Even in sea air, according to Dr. Rattray, in the last volume of the Medical-Chirurgical Transactions, it is not absent. This organic matter is the result, in all cases, of vegetable and animal emanations, and it necessarily varies in its composition according to the source from which it is derived. Rattray, in a most interesting paper in the volume referred to, gives an analysis of ship air, and after pointing out a variety of impurities of a gaseous character, states that the more solid impurities are of animal, vegetable, and mineral origin, from the skin, lungs, &c., of the crew; from the ship, as minute particles of wood, paint, whitewash, leather, &c.; from the bilge, containing occasionally minute microscopical animal and vegetable organisms; from the stores, particles of bread, cotton, wool, &c., and others which I need not mention. He states that it is the volatile organic matters thrown off by the skin which give the ship air its well-known and often nauseous smell. Dr. Parkes, in his admirable work on Practical Hygiene, gives the following account of hospital air. At page 88, he says: "I have examined the air of various barracks and military hospitals, and have detected large quantities of epithelium from the skin, and, perhaps, the mouth." At page 99, he says: "The most important class of diseases produced by impurities in the atmosphere is certainly caused by the presence of organic matters floating in the air, since under this heading come all the specific diseases. The exact condition of this organic matter is unknown; whether it is in the form of impalpable particles, or of moist or dry epithelium and pus-cells, is a point for further inquiry." And again, at page 106, he says: "The air of a sick ward, containing as it does an immense quantity of organic matter, is well known to be most injurious. At a certain point of impurity erysipelas and hospital gangrene appear. The occurrence of either disease is, in fact, a condemnation of the sanitary condition of the ward." Again, at page 100, he states that "erysipelas and hospital gangrene in surgical wards are often carried by dirty sponges, dressings, &c. Another mode of transference is by the passage into the atmosphere of disintegrated pus-cells and putrefying organic particles, and hence the great effect of free ventilation in military ophthalmia, in erysipelas, and hospital gangrene." Lastly Dr. Douglas Cunningham, of Calcutta, has recently found that the atmospheric dust largely consists of spores of fungi, and that the majority of these are living and capable of growth and development; and that bacterial matter exists also in dry dust, so that when this is added to putrescible fluids a rapid development of fungi and bacteria occurs. Here then we find, on the combined authority of able and recent observers, abundant evidence not only of the existence in the atmosphere of large quantities of suspended organic matters, but of animal *débris* and exfoliations, and of other animal particles, capable under favourable circumstances of generating septic diseases.

We are still in complete ignorance as to the precise nature of the septic poison that produces those various forms of disease that we recognise as being due to its influence. We know it, in fact, by its effects, but are ignorant of what it essentially consists. That there are different forms of septic disease appears more than probable. We find that the different varieties of septic diseases are not interchangeable, but are as distinct in themselves, in the symptoms they present, in the course they run, in the pathological conditions that are found, as any of the other zymotic diseases. In whatever way originating and in whatever it may essentially consist, there can be little doubt that this septic virus is communicable from patient to patient through the medium of the organic particles of various kinds with which the atmosphere of any crowded building, be it hospital, or barrack, or man-of-war, is invariably charged. And when we reflect on the exceedingly minute, infinitesimal, in fact inappreciable, quantity of any animal virus, as that of cow-pox, small-pox, or syphilis, that is needed to communicate its own disease when applied to a fitting soil, we can easily understand how the virus of the septic diseases that occur in surgical wards may be transmitted from wound to wound, even on so slight a vehicle as atmospheric dust.

There are four of these septic diseases universally recognised by surgeons—viz., hospital gangrene, septicæmia, pyæmia, and erysipelas. Let us very briefly study the mode of development of them.

With regard to hospital gangrene I need say but little. It is universally recognised by the concurrent testimony of military surgeons that this disease originates in the first instance as a direct consequence of overcrowding of the wounded in hospitals that are insufficiently ventilated. The experience of the Franco-German war added confirmation, if any were needed, to this view of the origin of the pestilence, which, however, when once generated, is capable of indefinite propagation by contact through the medium of the fingers, instruments, sponges, and surgical appliances. The occurrence of hospital gangrene in civil hospitals is now, fortunately, extremely rare, and its development in such institutions is of itself an evidence that the sanitary condition of the building is, for the time at least, in a bad state. The repeated occurrence of hospital gangrene in a civil hospital would undoubtedly be discreditable to those who had the management of its sanitary arrangements. In University College Hospital we have now had no outbreak of hospital gangrene for more than twenty years, and I trust never again to see it here as having been developed within the walls of the hospital. It is altogether a preventable disease, and ought never to occur in any institution that is conducted on sanitary principles. The few cases that we have had of late years have been brought into the hospital from without, and, curiously enough, last summer two cases came to us, of a mild form certainly, from a convalescent institution.

Septicæmia is not of very common occurrence, but yet there is a certain percentage of deaths occurring from it. In this hospital we have about one death in the year from this cause. Its influence on the general mortality after operations is therefore but trifling, but its existence is an indication of a septic influence, and I believe that a certain number of cases of low, irritative fever following operations and injuries partake of a septicæmic type. In fact, the gradation from ordinary traumatic fever into septicæmia is easy, and I believe not very unfrequent. Surgeons themselves suffer at times from small whiffs of this poison. Who that has been long connected with a hospital has not at times, after the examination of a sloughing cancer, or some other horribly putrescent and foul disease, felt feverish, depressed, prostrated for some hours, or a day or two, conscious of the absorption of a poisonous effluvium, which after a period of febrile depression eliminates itself from the system by an attack of offensive diarrhœa, the eruption of a pustule, or perhaps by some more distinctly localised inflammatory action, as tonsillitis, or a boil? The cause of septicæmia appears, however, to me to be somewhat obscure. It does not seem to be distinctly connected with overcrowding, but rather with the development of putrescent discharges from unhealthy or malignant ulcers. The offensive discharge from ulcerated cancer uteri is supposed by some to tend very specially to its production, and it has been a cause of death after ovariotomy when the operation has been practised in the same building in which a woman suffering from that disease is lying.

But the two most important of the septic diseases are undoubtedly pyæmia and erysipelas. These two diseases are commonly looked upon as being more or less allied, and they may be so in so far as their etiology and those epidemic influences that predispose to their occurrence are concerned, but in all other respects they differ widely.

Acute pyæmia is essentially a hospital disease. As has already been stated in the last lecture, it seldom occurs except in hospital practice; and perhaps the best proof that we have of the rarity of the occurrence of acute pyæmia out of hospital exists in the rarity of the admission of a pyæmic patient into a hospital from without whilst labouring under the disease. Almost every case of pyæmia that I have seen in hospital practice has originated within the building itself. By reference to Table B it will be seen that the amount of pyæmia varies very greatly in different London hospitals, which is an additional proof of its being dependent for its origin on conditions that are more rife in some institutions than in others. So far as University College Hospital is concerned, there appears to be at present a tolerably uniform amount of it. In three years, from July, 1870, to July, 1873, we had twenty-three cases: nine in connexion with

amputations, fourteen with other operations and injuries. Of these twenty-three cases, four occurred in the latter half of 1870, eight in 1871, eight in 1872, and three in the first half of 1873. As to the mode of its development, there can be no doubt that it is the result of the exposure of wounds to an atmosphere overcharged with organic matter emanating from other patients with suppurating wounds. What I stated in the last lecture about the infection of the military hospitals with pyæmia during the Franco-German war, and the comparative freedom of the hut hospitals from this disease, points clearly to the cause. I look upon pyæmia, when of traumatic origin, as being primarily the local septic impregnation of a wound by atmospheric matter in a condition capable of developing changes of such a character in the wound that its fluids decompose, its surface becomes foul and sloughing, and the veins leading from it become plugged with soft clots, putrid and easily decomposable. The constitutional symptoms of this dread disease—the prostrating rigors, the profuse transudations from skin and lung saturating the bedclothes and contaminating the air around with a faint, sickly odour, the high temperature, the extreme mental depression—are all consequent on the entry into the circulation of the septic virus deposited from air upon wounds, thence absorbed into the veins, and then transmitted through the system.

Pyæmia stands next to hospital gangrene amongst septic diseases of local origin. It is less marked in its local phenomena; it is far more developed in its constitutional symptoms, but though less marked locally it is most distinctly characterised. Mr. Beck, who has made the post-mortem examinations of the twenty-one fatal cases of pyæmia that have occurred in University College Hospital during the past three years with a degree of minuteness and care that leave nothing unnoted, states that in every case except one—a case of necrosis of the tibia, in which there was no open wound until a few hours before death—distinct local evidences were found. In fourteen cases the local origin of the disease was evidenced by broken-down and putrid clots in the veins leading from the part, and in six there were foul sloughing wounds. It is a remarkable fact that acute pyæmia never appears to occur in single isolated cases, but invariably in groups of two or three, not necessarily absolutely contemporaneous, but only separated by short intervals of time.

Is pyæmia contagious? The French surgeons generally believe that it is highly so. I have never seen an unequivocal instance of it. This, however, may be accounted for by the fact that whenever a case of pyæmia has developed itself in this hospital immediate steps have been taken to guard against contagion by isolating the patient and disinfecting the ward. We act, in fact, as if its contagion were proved, although we may not in reality be in possession of this proof. There certainly appears to be an epidemic influence that favours its development. It is often coincident, though not invariably so, with outbreaks of erysipelas both in the hospital itself and out of doors. I have already said that it is necessary for the surgeon to consider the nature rather than the number of the cases contained within a surgical ward. This is well exemplified by an outbreak of pyæmia that took place in Ward 1 in January, 1871. In the early part of the month this ward contained a rather large number of severe wounds, including a sloughing cancer in the groin, an amputation of the leg, a compound fracture of the fibula with extensive laceration of the soft parts, a compound fracture of the femur, and one of the tibia. Pyæmia occurred in the case of amputation of the leg on the 19th of January, in the compound fracture of the fibula on the 3rd of February, in the compound fracture of the femur on the 13th, and all these patients died. At no time, however, was the ward overcrowded as to number of patients, two out of fourteen beds being empty the whole time, so that each patient had a cubic space of no less than 1800 feet of air. But the ward contained for two months an average of seven or eight open wounds, of which five were always severe, such as amputations or compound fractures. During this period there was only one case of erysipelas, and the hospital generally was free from that disease. Another instance of a similar kind occurred in December, 1872. At this period Ward 1 became again crowded with severe wounds, there being an average of nine open wounds, seven or eight of which were severe, including three amputations and an extensive necrosis of the tibia. One of the amputation cases had pyæmia and recovered, the only instance of recovery from pyæmia during the last three years and a half. Another had pyæmia and died. On this occasion erysipelas broke out in three cases. In both these outbreaks the weather was cold.

Now in erysipelas we find various influences tend to develop the disease. Contagion, overcrowding, and epidemic influences all produce their effect. About the contagion of erysipelas there can be no question. I could adduce many instances of it, but one especially occurs to me. Though it happened many years ago, it made a deep and lasting impression upon my mind. I will read an extract from the notes I took at the time. On the 17th of January, 1851, a case of phlegmonous erysipelas of the leg was accidentally brought into Ward 1. As soon as the nature of the disease was discovered the patient was removed to the erysipelas ward at the top of the building, having only remained in Ward 1 for about two hours. At this time Ward 1 was perfectly healthy, but in a few days after, a patient lying in the next bed to that into which the erysipelatous patient had been taken, and who had been operated on for necrosis of the ilium, was seized with erysipelas. On the 22nd I performed five operations on patients who were in this ward. Of these cases three were attacked by erysipelas on the 24th—viz, a case of necrosis of the tibia, one of partial amputation of the foot, and one of encysted tumour of the scalp. All these patients died. On the 24th a patient was operated on by me for strangulated femoral hernia in this ward. He was seized with symptoms of low peritonitis, doubtless of an erysipelatous character, and died on the 31st. No case of pyæmia showed itself, but all the patients in the ward who were not attacked by erysipelas had diarrhœa and severe gastro-intestinal irritation. Here were a series of lamentable catastrophes doubtless directly introduced by the accidental intrusion of an erysipelatous patient into an operation ward, the disease being then propagated by contagion, though he only remained for two hours in the ward. That erysipelas, however, may be developed in other ways there can be little question. I believe that by no means an uncommon cause of infection occurs from dissecting students. I have several times seen cases, both in hospital and private practice, distinctly referable to contamination from this cause, and I think that no student, during the time that he is engaged in dissections, should be allowed to act as a dresser in a hospital. There is a remarkable resemblance, if not an actual similarity, between puerperal peritonitis and erysipelatous inflammation of the peritoneum following operations on the organs contained in that cavity. The influence of contamination in the way I mention is well illustrated by what occurred some years ago at the Vienna Hospital, and is described by Dr. Braidwood in his work on Pyæmia. Prior to 1846 the number of deaths amongst lying-in women in this hospital was 1 in 10. In order to check this frightful mortality, Dr. Senelweiss required the students who attended these women to avoid making autopsies, and obliged them to wash their hands in a solution of chlorine before and after making vaginal examinations. The result was that the mortality in 1848 had fallen to 1 in 74.

That erysipelas is often of epidemic origin there can be no question, but the influence of any epidemic is immensely increased by unhealthy conditions of a ward from overcrowding. Of this I will give you one illustration. In the middle of November, 1872, ward No. 1 was filled by a very severe set of cases. There was one patient who had had both legs amputated below the knees; another whose leg had been amputated through the knee; another who had a compound fracture into the ankle-joint; one with extensive necrosis of the tibia; and another with extensive laceration of the forearm. And this condition of things was kept up during three primary operations—one of the foot and the others of the thigh; these cases being admitted in December, but whilst the preceding ones were under treatment. There was no erysipelas in the ward until Nov. 15th. On that day the patient with compound fracture into the ankle was attacked. He recovered, and the erysipelas had left him by the 21st. On this day the patient with necrosis of the tibia had the sequestrum removed: he was a feeble old man; he was attacked by erysipelas on the 1st, was removed to the erysipelas ward, and died on the 7th of December. On the 4th of December the patient with the

scalp wound was attacked, and was at once removed to the erysipelatous ward. During this period—namely, Dec. 7th and the 22nd—two of the other patients, the one with an amputation through the knee-joint and another, were seized with pyæmia. Only one out of the twenty-three patients with acute traumatic pyæmia recovered. During the same period two of my patients in Ward 5, both suffering from chronic wounds, one of fistula and another with a sinus in the thigh, were attacked by erysipelas. To them it is possible that the disease was conveyed by the house-surgeon or dressers. But as other cases of erysipelas occurred in the hospital at the same time, and one was admitted from out of doors, it is probable that an epidemic influence existed.

In the next lecture I shall proceed to the consideration of the circumstances by which the fatality may possibly be lessened, and of the influence of treatment in diminishing septic disease in hospitals.

Note.—In the last lecture it should have been stated that primary amputation of the thigh at the hip-joint is not admissible in adults; in children it has succeeded.—J. E. E.

An Address
ON
PYÆMIA IN PRIVATE PRACTICE.

Delivered before the Clinical Society of London, January 23rd, 1874,

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GENTLEMEN,—In taking the chair this evening, I cannot refrain from thanking you for the honour which you have again conferred upon me in placing me in this position. I confess I had my misgivings as to my fitness when I took the chair last year; but whatever may have been my shortcomings, thanks to the Council, and more especially to the unwearied zeal of our secretaries and our treasurer, I am happy in being able to congratulate you upon the still increasing prosperity of the Clinical Society.

With these few but heartfelt words, I pass on to the more immediate business of this evening, and in doing so I shall follow out the course which I ventured to enter upon last year, and will again give you some gleanings from private practice the clinical results of which may be made valuable, and all the more so when contrasted with those of hospital practice.

The subject to which I shall direct your attention is that of Pyæmia, a subject than which none is more important, and the consideration of which, in some of its bearings, has of late years been largely occupying the attention of our profession. The few observations which I have now to offer you on this subject will be confined altogether to cases occurring in private practice.

A young lady, aged fifteen, stoutish, but of good general health, came under my care for congenital cystic tumour at the root of her neck. When an infant an attempt had been made to remove this tumour, but a bit of it was left, as it was closely adherent to the large vessels. For several years after this operation nothing was noticed in relation to this tumour; but for two or three years previous to my seeing the patient it had, without any apparent cause, taken to growing; and when I was consulted it occupied the whole of the lower part of the left side of the neck, projecting beyond the clavicle. At a consultation with Mr. Keate, who performed the operation, it was determined that single-thread setons should now be used, and two of these were introduced into the tumour. In a few days intense inflammation set in, and suppuration followed. A quantity of matter was let out; the swelling subsided, and for some days everything appeared to be going on satisfactorily; then came rigors and sweating, but without any increase in the local trouble. After a while it became evident that the patient was suffering from pyæmia, the mischief being in the left lung; and for several days her condition was most perilous. But one afternoon, after a violent fit of coughing, a large quantity of offensive matter was suddenly brought up, after which the more dangerous symptoms gradually subsided, and the patient ultimately recovered. She remained perfectly well, without any further trouble as to the tumour. In this case the patient's room was large, lofty, and well ventilated, and was in a well-found house in one of the best streets in town.

A hale old gentleman, close upon eighty, who had long enjoyed excellent health, had a small warty growth on the skin just over the insertion of the tendo Achillis. This growth I removed, as it constantly became chafed and troubled him much in walking. I made him lay up for a few days. As the trifling wound was all but healed, he was allowed to go about a little; but being of very active habits, he one day took a longer walk than usual. This was followed by some slight inflammation of the wound, which, however, soon subsided. He was on the eve of returning to his usual avocations, when rigors and sweatings made their appearance. Then came an immense deep-seated abscess in the thigh, under the constant drain of which he ultimately sank.

I was called in consultation to a gentleman who was suffering from pyæmia, who a short time before had had a small wart removed from the scrotum. He died. The details of the case are given further on, as I had attended this gentleman three or four years previously for a former attack of pyæmia.

Shortly after I began practice I removed a small sebaceous tumour from the scalp of a lady. Everything went on well for the first few days, then came erysipelas of the scalp, subsequently followed by pyæmia and death. As far as one could judge, the conditions under which this trivial operation was performed were all favourable. The patient was middle-aged and not stout. She had some months previously undergone, without a bad symptom, a similar operation for the removal of three other sebaceous tumours. The bedroom was in a house in one of the most open and healthiest of our squares, and was large and well ventilated. The weather was temperate, and the patient had remained in the house after the operation.

I operated upon a middle-aged lady of good general health for scirrhus of the breast, and for the first eight days everything looked promising; then came rigors, followed by erysipelas around the wound, which for a few days went on slowly spreading. Subsequently pyæmia came on, and under this she gradually sank. The house in which the operation was performed was in one of the best streets in Pimlico; the bedroom was of a good size, and well ventilated.

About a month afterwards I operated upon another lady for scirrhus of the breast. She was middle-aged and slim. She was of a sallow complexion, and of good general health. In this case, too, everything promised well for the first few days. Then came severe rigors and sickness. Erysipelas soon made its appearance around the wound, from whence it gradually spread. Matters went on thus for a few days, then there was pyæmia, and in a few days more the patient was dead. In this case the operation was performed a few miles out of town. The bedroom was large and well ventilated, in a large and well-built house, with all modern appliances, and situated on a heath on an elevated ground, overlooking a wide expanse of country. As far as one could judge, no better or healthier situation could have been selected for an operation.

A lady, aged about forty-five, had a large sero-cystic tumour of the breast, some cysts of which occasionally suppurated, and under such circumstances were sometimes opened and sometimes allowed to burst. Matters went on thus, as she would not hear of an operation, for between eight and nine years, her general health being as good as ever between the attacks. At this period a small cyst suppurated and was allowed to burst; shortly afterwards erysipelas made its appearance round the edge of the little sore. Then in a few days came rigors and sweating, with pain and great swelling in one of the knee-joints. In a few days more this lady sank. At the time of the bursting of the cyst the patient was in her usual good health. Her bedroom was of fair size and well ventilated, in a house in a part of town generally considered to be one of the healthiest.

A young gentleman met with an accident to his shoulder which led to inflammation of the joint, and for this he ulti-

mately consulted me. After a while the inflammation subsided, leaving the joint somewhat stiff. Then, persuaded by some friends, he went to a bone-setter, who pronounced that the bone was out, and proceeded to put it back. The manipulations gave great pain, and were followed by a recurrence of inflammation in the joint, for which he once more fell under my care. Suppuration of the joint ensued, and abscesses burst in various directions. Thus matters went on for a time; then came rigors and profuse sweatings, and a sodden appearance of the skin; an anxious countenance, a running pulse, and great loss of flesh; the joint itself and the parts around it being meanwhile without any increase of mischief. Although tall and slim, this gentleman, up to the time of going to the bone-setter, had been in good health, and his family was healthy. He remained in this perilous condition for some time, looking as if secondary abscesses might occur at any moment. All this time he lived out of town in a good country house, well cared for, and with plenty of fresh air. With winter coming on, I sent him to the south of France, where, after a residence of some months, the more threatening symptoms gradually subsided; and when he returned to this country there was a decided improvement in his general health, but he was still far from well, and remained more or less ailing between two and three years, at the end of which period he was in fair health, with a permanently stiff joint, the abscesses about the shoulder having gradually dried up.

A middle-aged lady, in fair health, was supposed to be suffering from a sharp attack of sciatica, for which she was ultimately sent to Wiesbaden; but after a time, finding there was no improvement as to pain, she returned home, and for some months went about under the supposition that she was suffering still from sciatica. It was at this period that I was consulted on account of a swelling which had been gradually making its appearance in the corresponding groin. The swelling proved to be an abscess extending into the iliac fossa. On further investigation, the sacro-iliac joint was found to be the source of all the trouble. The abscess was allowed to burst, after which everything went on satisfactorily for three weeks, when pyæmia came on, and was followed by death in a week. This lady lived in a house on a hill, a few miles out of town, in every respect well found, and bedroom airy and well ventilated.

I was telegraphed for, a few miles out of town, to a gentleman about thirty years of age, who was thought to be suffering from an acute inflammation of both ankle-joints and inflammation of the left lung. The case, on closer examination, proved to be one of pyæmia in connexion with suppuration about the tonsils. In a few days the inflammation around the ankle-joints ended in the formation of matter, which was let out; after which this patient gradually recovered, and in a few weeks was restored to his usual good health. This case has already been alluded to as that of the gentleman who died of pyæmia after a trifling operation for the removal of a small wart on the scrotum. Between the two attacks of pyæmia there was an interval of between three and four years. The first attack occurred in the country, and the second in town.

Recently, too, I have seen another gentleman, who, in connexion with suppuration about the tonsils, had symptoms of poisoned blood, rigors, profuse sweats, and sodden skin, under which he sank.

A young gentleman, aged eighteen, had a severe attack of typhoid fever, from which he was making a good recovery, when, about a fortnight after all the symptoms had disappeared, he again became feverish, and soon afterwards, without having met with any accident, complained of pain along the shin bone, and swellings, which were very painful, formed along the surface of the bone. Suppuration followed, abscesses were opened, and went on discharging for some time, after which they gradually dried up without any further mischief.

A lady's maid, aged thirty, had a severe attack of typhoid fever in the country. She recovered; and, being considered convalescent, came up to town shortly after, when smart feverish symptoms made their appearance, soon followed by swelling, affecting principally the knee, and extending some distance down the front and inner side of the leg. For a while the symptoms were very severe, and ended in extensive suppuration about the upper part of the tibia. Matter was let out, and the patient gradually recovered; but the free use of the limb was not regained for a couple of years, and during this period several bits of bone came away.

A delicate, middle-aged lady had typhoid fever, which in due course passed away, leaving her weak and ailing, with now and then recurrence of slight feverishness. After a time this feverishness became more marked, and then she began to complain of very severe deep-seated pains in various parts: first, at the upper and inner side of the tibia; then, at subsequent periods, over the lower part of the shoulder-blade along the middle part of the spine, over the ribs, as well as over the crest of the haunch-bone. The pain in each part was followed by swellings, and ultimately abscesses, some of which were large and deep-seated. The abscesses were allowed to burst; and then, after the subsidence of the swelling, a probe was in each instance easily passed down to the periosteum, and in some parts the bone was found bare. The drain was great, hectic set in, and, after intense suffering, with occasional but limited mischief about the lungs, this lady sank.

A delicate-looking girl, eighteen years of age, ran a needle into the fleshy part of her leg. It broke off, and could be felt beyond the skin. The needle was pulled out, and she went about her work as usual; but in a few days the tiny wound festered, and in a few days more she was admitted into St. George's Hospital with symptoms of pyæmia, rigors, profuse sweatings, and swellings in various parts. Subsequently came evident signs of mischief about the lungs. She sank within a month after the trifling injury. The needle, according to the patient's account, was quite clean. She stated that she had never been laid up before, and had always had good health.

A young gentleman, aged eighteen, apparently in good health, while bathing, ran a small splinter of wood into the fleshy part of his great toe. This was immediately plucked out, and he went about as usual for several days as if nothing had happened. This spot became painful. A tiny abscess formed, which was attended to; but in a few days was followed by urgent symptoms, severe rigors, and most profuse sweating. Abscesses formed in the leg. One, a very large one, was deep-seated, and in the calf. As they appeared they were dealt with; but for weeks the sweatings were so profuse that it was necessary to change the bed-linen several times during the twenty-four hours. Ultimately the patient recovered, and he left his bed a mere skeleton between four and five months after the onset of the attack. The bedroom was of fair size and well ventilated, with a large window looking over a wide expanse of country. The house was a recently built one, being on the outskirts of the town.

A gentleman of middle age was tripped up in the street and fell violently upon his elbow, the lower bones of which were thereby dislocated backwards and partially thrust through the skin. The dislocation was easily reduced, and for a few days everything went on well. Then came suppuration of the joint, followed in about a fortnight by severe rigors and profuse sweating, with swellings in various parts. He died a month after the injury. The bedroom was a fair-sized one and well ventilated, and the house was in a good street on the north side of, and not far from, Hyde-park.

A little boy, aged six, met with a slight accident to the foot, which was followed by acute periostitis of the bones of the tarsus. This ended in suppuration. Some of the joints were destroyed, and, at different periods, several abscesses formed in various parts—over the great trochanter, over the crest of the ilium, and in the sacro-lumbar region, as well as over the bones of the skull in different places. The suffering was intense, with low muttering delirium and rapid wasting to such an extent that the child was soon reduced to a mere skeleton. Thus matters went on for some weeks, after which the abscesses gradually dried up. Anchylosis of the bones of the tarsus took place, and when last seen, a couple of years after the attack, he was a strong active lad. All this occurred some miles out of town, in a good house in a healthy part of the country.

I was summoned a long way into the country to a young lady labouring under symptoms of a typhoid character, the origin of which was obscure. It appeared that she had recently had measles, which had been followed by a slight discharge from the left ear. The recovery from the measles had been good, and she was going about, when rigors and sweating occurred, followed by fever, a dry brown tongue, with great prostration; and such were the more obvious symptoms when I saw this young lady. On further inquiry,

it was now found that the discharge from the ear had stopped. The intellect was quite clear. There was no pain in the head, and no swelling in the neighbourhood of the ear; but there was pain upon pressure immediately below the mastoid process, and this tenderness extended also some way down the side of the neck in the course of the internal jugular vein. From this it was inferred that inflammation had spread from the ear to the lateral sinus and the internal jugular vein, and that in all probability secondary abscesses would follow. In a few days a large abscess showed itself in the left sterno-clavicular articulation. Then came pain and swelling about the left knee and ankle, and inflammation of the back and lower part of the left lung, and a large deep-seated abscess at the back of the left hip. The abscesses were opened in due course, but the mischief about the knee and ankle joints and in the lung subsided. The patient gradually recovered, and in a few months was quite well again. The conditions in which this young lady was placed were unexceptionable. She had a large, airy, well-ventilated room, looking on to the open country.

A young lady had, after her confinement, severe symptoms of low peritonitis, and was in great peril for some days. She recovered, and appeared to be going on well for a time, when the left shoulder became very painful. For this I was asked to see her. Examination proved that the joint itself was not affected; but the parts around were much swollen and very painful, and especially so in front of the joint. Ultimately a large abscess formed in this situation. It was opened, and the patient got well and went into the country, where, some weeks afterwards, deep-seated matter formed in the pelvic region. This burst into the vagina. After a time she recovered completely, and has remained in good health ever since.

An officer in one of our light cavalry regiments, aged eighteen, came under my care for gonorrhœa. The symptoms were severe, and so he kept at home. He was treated with opiates and demulcents. About a fortnight after he had been under treatment symptoms of what appeared to be gonorrheal rheumatism made their appearance. First, the left shoulder-joint was affected. After a while the symptoms subsided. Then, without any apparent cause, came rigors and profuse sweatings, a dusky appearance of the skin, with great disturbance of the general health. These symptoms were soon followed by intense pain in the left sterno-clavicular articulation, which became much swollen, and in a few days presented evident signs of fluctuation. A large quantity of matter was let out. Inflammation and suppuration in and about the right hip-joint, accompanied by most intense pain, followed. In due course the matter was let out, and subsequently numerous small abscesses formed in the skin over various parts of the body. The patient was reduced to a mere skeleton, and, notwithstanding all possible care, the whole sacrum became exposed. The more intense symptoms about the hip having subsided, the patient was now turned over to the left side, and in a few days the skin over the great trochanter gave way, and the bone became exposed. He was then propped up, so as to rest mainly on the ischiatic tuberosities, and as the skin after a while gave way, he was turned once more on to his back, the sacrum being by this time for the greater part covered over by healthy granulations. Whilst in this position the skin over the various spinous processes of the vertebræ which happened to touch the bed gave way. What with one thing and another, I never saw a patient suffer more intense agony. It was such as to necessitate the full administration of chloroform fifty-five times consecutively for the dressing of the various sores. Notwithstanding all this he ultimately recovered, with an anchylosed hip. The onset of the attack was in the early part of the year. The patient's room was large, lofty, and well ventilated, and was in a house in one of our great squares. When this gentleman first came under my care he was one of the healthiest-looking young men I ever saw, strongly built, and most active, and he subsequently was one of the most dashing light cavalry officers in the Central Indian campaign.

Some time after the occurrence of this case, the late Dr. Bence Jones happened to mention to me that he had been summoned into the country to a young gentleman suffering from well-marked pyæmia, without, as far as could be ascertained, any previously-existing suppurating surface. I told Dr. Bence Jones of the above case of pyæmia after gonorrhœa, and begged him to ascertain, if possible, if his patient was suffering from gonorrhœa. The patient died before Dr. Bence Jones saw him again, but at the autopsy the existence of gonorrhœa was clearly proved.

A third case of a similar nature, and in a young gentleman, was also mentioned to me by Dr. Guéneau de Mussy.

Such, gentlemen, are the cases of pyæmia occurring in private practice to which I wished to direct your attention. They are twenty-three in number, and twenty-one of them fell under my own notice. The remaining two—the last,—being well authenticated, have been alluded to simply on account of their extreme rarity. And now, if we proceed to analyse the circumstances under which pyæmia occurred in these twenty-three cases, it will be found that an operation was performed in six instances only. In four of these the operation was of the most trifling nature—a single-thread seton, a small wart on the heel, a small wart on the scrotum, a small sebaceous tumour of the scalp; and it was only in the remaining two that the operation was of a somewhat severe character—amputation of the breast. Moreover, the first four cases were all in different years, and not in the same locality. The last two were in the same year, and within a month of each other: one was in town, and the other was in the country. And here let me note, the third case is also mentioned among those of recovery, this patient having had two attacks of pyæmia at several years' interval, and in different localities. Of the remaining seventeen cases, in which no operation had been performed, there was a broken surface in eleven, and in six there was not even an abrasion. Of the eleven in which there was a broken surface it was but small in ten: ulceration of small sero-cystic tumour of the breast, of abscess in two, of tonsils in two, of bowel in typhoid fever in three, a needle broken in the leg, a small splinter of wood in the great-toe. The eleventh case was the only severe one: compound dislocation of the elbow. The six cases in which there was no abrasion were: slight injury of the foot followed by suppuration, inflammation of the lateral sinus of the internal jugular vein in connexion with discharge from the ear after measles; abscesses after parturition and gonorrhœa in three. Of these seventeen cases, none occurred at the same period or in the same locality. As to locality, of the twenty-three cases, sixteen occurred in town and seven in the country. Of the sixteen in town, all, with one exception—that of the young girl who, after running a needle into her leg, was admitted with pyæmia into the hospital—were in the best parts of the town, scattered about in good houses of good sizes, with well-ventilated bedrooms, well cared for, and, in fact, to all appearance, under the most favourable conditions. The seven country cases were in different parts and widely separated from each other. Their conditions, too, were in all respects apparently excellent. As to age, the youngest patient was six, the eldest close upon eighty. Of the remaining twenty-one, eleven were between fifteen and twenty-five, and ten between thirty and fifty. As to local treatment, it was out of the question in several of these cases, and in several cases, too, all possible care and supervision on the part of the surgeon would have been of no avail whatsoever. Of the twenty-three cases, eleven were under such circumstances.

In conclusion, pyæmia, it has been said, is caused, for the most part, by foul air consequent upon the aggregation of surgical cases in the wards of large hospitals, but pyæmia occurs also in cases even while placed under the most favourable conditions—perfect isolation, large airy rooms in the country, with plenty of fresh air, and in every way well cared for. Pyæmia appears, too, at times to be connected with atmospheric conditions, several cases occurring, without any apparent cause, at or about the same period in different places. The two cases of amputation of the breast, which were within a month of each other, followed exactly the same course, one, however, being in town, and one a few miles out of town; and at the same time that these cases were under my care other cases of pyæmia which occurred in private practice at the same period subsequently came to my knowledge. Moreover, cases occur in which patients are apparently prone to pyæmia, as in the case of the gentleman who recovered from an attack of pyæmia, and a few years afterwards died of another attack. The truth is that the causes of pyæmia are still to be worked out, and this, gentlemen, is a problem the working out of which I would strongly urge upon the Clinical Society.

WHEN AND HOW TO USE MERCURY IN SYPHILIS.

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(*Concluded from p. 88.*)

I HAVE ventured to appeal to common experience as to the specific results of mercury in causing the speedy removal of the indurated chancre and of the ordinary forms of secondary eruption. It would, indeed, be a waste of time to adduce special facts in proof of this. But there are facts of a somewhat different kind which are not less valuable in support of my argument. I allude to its results in certain rare cases in which the disease had assumed unusual features, had been protracted to an unusual extent, or had resisted in a remarkable manner other remedies. In some of these the proof of curative power is very strong indeed. I must here introduce the particulars of three instructive cases.

The case of Mr. S——, whom I attended with Dr. Mundie, of Dalston, in April, 1870, illustrates several very important points. Mr. S—— went through an attack of secondary syphilis so severe that we feared he would have died. He was a remarkably robust man, a large eater and of excellent digestion. He was florid, of rather fair complexion, and had blue eyes. At the date of my first visit he was confined to his bed with a profuse ulcerating rash, which covered his face and scalp, was copious on his trunk, and in tolerable abundance on his limbs. It was a form of rupia, but had also certain peculiarities. Its first stage was a vesication, the contents of which rapidly became turbid and dirty, and the base of which was much inflamed. A scab formed, around the edges of which a ring of vesications arose, and thus by gradual increase patches were formed as large as the palm of the hand. Most of these were horseshoe-shaped rather than round, and healed at some parts whilst they spread in others. Deep and dusky scars were left. On the legs there were deep ulcers of a most unhealthy aspect, some sloughing at their edges, and all of them showing a grey, pultaceous base. The poor fellow stank abominably, was much emaciated, and naturally in very low spirits.

Now, what gave peculiarity to the attack of syphilis in this robust man? I ascertained that, during the present attack, he had taken no mercury whatever. It had begun about three months before my visit by a sore on the penis, to which he paid no attention, and which was followed in six weeks by a rash which had gradually increased up to its present point. He had been under Dr. Mundie's care only two weeks, and during that time had taken iodide of potassium liberally, and had kept to milk diet. We ascertained on inquiry that he had previously had two separate attacks of syphilis. The first of these was fourteen, and the last nine years ago. In each the chancre was believed to be a hard one, and in each he took mercury. In one he took mercury very largely indeed, and without any salivation or any perceptible effect on his health. So far as he knew, he had never been salivated in his life. The second attack of syphilis was attended by a rupia rash, not very profuse, but which left deep scars that were still visible. After this rash, and for seven or eight years before his present attack, Mr. S—— was quite free from symptoms and in excellent health. He was a very temperate man, occupying a confidential position in a City house.

Thus, then, I was inclined to think it probable that Mr. S—— was of an idiosyncrasy which made him less susceptible than usual of mercurial influence and liable to suffer very severely from the syphilitic virus, and further that the liability just referred to might possibly have become intensified by previous attacks. At the time of my visit the sore on the penis still remained, and was inflamed and unhealthy, though not absolutely phagedænic. The important question as regards treatment next occurred. Although we had the history that on a former occasion it had been found impossible to salivate him, yet, as the rash was now rupial, we hesitated to give him mercury. I feared that it might cause the eruption to spread more deeply. We prescribed the iodide in increased doses and more frequently, and ordered black wash and a weak mercurial ointment for the sores.

I saw Mr. S—— for a second time a month later. He was in no respect better, though he had taken the ten-grain doses of iodide with praiseworthy regularity. He was covered from head to foot with sores, and many new vesications were still coming out. He had lost flesh, and was very weak, so much so that he had almost fainted in his bath. He had taken milk and bread very plentifully, and had abstained wholly from stimulants and almost so from meat. He had been more than ten weeks in bed. We now determined to try the influence of mercury, and the bichloride, in doses of a drachm of the Pharmacopœial solution three times a day, was ordered. The change in the course of a week was marvellous. When I next saw him all the sores were healing, and there was not a single new one to be found. The mercury was continued, and in the course of a few weeks the eruption was well. I saw Mr. S—— repeatedly during the next year, and can report that his cure was most satisfactory in all respects.

Now, I claim for this case that it proves that syphilis may so completely pass away under mercurial treatment that the patient not only loses all symptoms, but becomes again susceptible of contagion. The liability to second infection is perhaps the best proof of real cure that we have, and it occurred twice in the case I have narrated. I must ask attention also to the fact that the second attack of syphilis was very severe and the eruption of the bullous and ulcerating type, yet mercury was well borne and cured it. Let us also note that the quantity of mercury taken was large and that no salivation ensued, and that the patient after his cure enjoyed an eight years period of excellent health before he contracted his third chancre. Lastly, we come to his third attack, in which a most severe rupial eruption resisted the iodide of potassium altogether, although given for two months and in large doses, but yielded in a few weeks to mercury.

I will place in juxta-position with this case another, which I am glad to be able to illustrate by a coloured portrait. The drawing which I exhibit was made a few months ago from a man under my care in the London Hospital, in order to show the characteristic features of rupia, and to prove that this eruption belongs to the secondary stage. I had treated the man for his chancre, and he had never left the hospital. The facts of his case are as follows:—He is a dark-haired, blue-eyed man, of rather delicate appearance. He was admitted in July last with a phagedænic chancre, which had existed nearly a month. We adopted for the phagedæna the immersion plan of treatment, and he was kept for a fortnight in a hip-bath almost night and day. Slowly the phagedæna stopped and the sore healed. I ought to have said that he had taken no mercury previous to admission, nor did we give him any afterwards; he took only tonics. Before the sore became healthy an eruption, tubercular in the first instance, began to show itself. The spots inflamed and ulcerated, and scabs formed on them. Being averse, as a rule, to the use of mercury for phagedænic chancres or for ulcerating eruptions, I now prescribed iodide of potassium, remarking to my class that we should have a good opportunity for seeing what the iodide could do against secondary syphilis. This salt was begun, in five-grain doses, on July 16th, and was steadily increased every third day until on October 27th the man was taking thirty-five-grain doses four times a day. During this time some of the sores had healed and had passed into the keloid state, but many others had appeared, and on the legs were large ulcerated surfaces, with thick, dirty scabs, in a much more aggravated condition than any shown in the portrait. The man had had bad nights from pain, and was almost confined to bed by his weakness and by the troublesome ulcers in his legs. At length, thinking our trial of the iodide had gone far enough (seventeen weeks), and that the severity of the disease was such as to warrant us in running a little risk, I determined to try mercury. We gave it in doses of a grain and a half of grey powder three times a day. It was begun on November 13th. After a few days we reduced the frequency to twice a day, but after a few more we returned to three times. Thus he has continued up to the present date, and he is now, with the exception of one small ulcer, quite well. The effect of the mercury was evident within a week of its commencement, and within a month almost all the crusts had fallen and most of the sores were well. The man gained strength and became able to sleep well, and he

is now not only rid of his eruption but in greatly improved health. He has never been salivated, but his gums have been slightly spongy at times. It will be seen that he has taken the mercury now for about seven weeks.

I adduce this case, which was treated in public and carefully watched, as proof that iodide of potassium may fail to influence a secondary syphilitic eruption which may be promptly cured by mercury.

I must ask the indulgence of the Society for the narrative of a third case. In this, too, I had had the patient under care almost from the beginning. Mr. Y——, a gentleman of fair complexion and strumous tendencies, contracted a chancre in December, 1870. It was indurated, and was followed by a rash of a tuberculo-pustular character with a tendency to rupia. At first he took iodide of potassium, but, finding no benefit, came to me; and in order to shorten the story, I may as well frankly admit that he has been under my care ever since—that is, through a period of nearly three years. He has suffered most severely. In the first instance I gave mercury, and with good effect; but, unfortunately, he was salivated, and we had to desist. Then, finding that the rash showed a tendency to ulcerate, I fell back on the iodide. This latter we gave repeatedly for very long periods, and in doses which I scarcely like to name. Sometimes he got better for a while, and then he relapsed. At one time he had phagedænic ulceration in the throat, at another in the nose, and on a third occasion one membrana tympani was destroyed. Several times, finding that the iodide did not cure, I recurred to mercury, giving usually the bichloride, and sometimes in combination with the iodide. Repeatedly very remarkable benefit was obtained, but still we could not hold our ground; and as I had all along suspected that the first ptyalism had made him worse, I never had courage enough to push mercury. In the autumn of last year he was still suffering from serpiginous ulceration over his eyebrow, when a large new sore formed on one thigh. This occurred whilst taking the iodide. The sore inflamed, and became as large as a crown-piece, with undermined edges and a most unhealthy base. The disease had ruined his prospects and exhausted his funds. He had been twice sent to the seaside, and had returned without advantage. He was almost in a state of despair, nor could I wonder at it, for he had used the legitimate remedy most perseveringly. At this juncture we determined to try the mercurial vapour bath. Before doing so he saw Mr. Henry Lee and received his assent to the plan, and had the advantage of his advice as to details. As soon as he began the baths improvement set in, and in the course of six weeks he was perfectly well. He had borne a decided ptyalism without injury. At present he has not a sore remaining, and is in excellent health.

In reviewing this case, which was finally cured by mercury after pounds and pounds of iodide had been swallowed without success, I find from my notes that there is reason to think that on several occasions we had gained very great advantage from mercury. Had it been more courageously pushed on previous occasions, probably we might have succeeded by internal administration as well as we did finally by the bath. The ulcerating, almost phagedænic character of the eruption, and the state of the patient's health, however, always made me afraid of mercury, and inclined me to regard the iodide as the more suitable specific. The case certainly proves that the bath is an excellent mode of administration, but perhaps it does not prove so much as it may at first sight appear to do as to the relative superiority of the bath over other modes.

The three cases which I have just quoted in order to display, in a strong and conclusive light, the efficiency of mercury in certain unusually severe cases, illustrate also two other questions which may be here suitably discussed. The first of these is that as to the efficiency of iodide of potassium in the secondary stage; the second is, whether mercury is inadmissible in phagedæna and ulcerating forms of rash. In reference to the first, let me here express the conviction that nothing has as yet been proved in favour of the efficiency of the iodide in the exanthem stage of syphilis. No one values the drug more highly than myself as a specific of really wonderful efficacy for most kinds of tertiary manifestations; but I may repeat, I have seen no reason to believe that it can materially influence either the primary chancre or the secondary rash. I have seen numberless instances of the common forms of tubercular and papular or scaly rashes which had been treated by it without effect, and which yielded at once to its great rival. Nor do I believe, nearly so strongly as I once did, that it is efficient against the ulcerating forms of secondary rash. The three cases just quoted show that it, at any rate sometimes, fails remarkably in these; and my impression is, that in selecting our specific we ought to be guided much more by a knowledge of the stage of the disease than by any special character of its manifestations. I am even inclined to go a little further than this, and to suspect that even in some of the cases in which the iodide shows most potency, it is, after all, only the second-best remedy; and that mercury, administered cautiously and in very small doses, might, not improbably, prove to be more permanently curative. The iodide is, in all probability, not an antidote, but acts rather by controlling the inflammatory process.

Next as to the question, Should mercury be avoided in cases of ulcerating rashes? I may admit that I have long held and taught what is, I believe, the usual creed, that it ought, for the most part, to be carefully shunned. Certain facts, however, have led me to place less reliance on the evidence which seemed to support this conclusion than I once did. I have seen mercury cure some of the worst cases of this kind. In others, in which it seemed to disagree or to aggravate the rash, the cause was, I have been led to suspect, rather in the mode of its administration than in its intrinsic unfitness. Many of them were instances of early ptyalism and premature abandonment of the remedy, and in many, probably, the dose was too large. Had the dose been reduced, or had the bath been used instead of the internal administration, I cannot help suspecting that not a few of the facts which have helped to strengthen the opinion that mercury was prejudicial in such cases would have melted away. Most undoubtedly, mercury has no power over the phagedænic type of inflammation, and I should not in the least expect to cure a chancre of this kind by its use. Phagedæna is a local process, and must be dealt with by local remedies. It is not syphilis, but an accidental complication of a local syphilitic inflammation. Those who gave mercury for sloughing chancres and did little or nothing to the sore itself would certainly have no good results, and, seeing the ulcer spread rapidly, might easily be led to report that in such cases mercury is a poison. If, however, other suitable local measures were adopted, I am by no means certain that mercury ought not to be given internally at the same time. I give this opinion, however, without any actual experience; for I never really treated a phagedænic chancre with mercury.

It may be convenient that I should here advert briefly to some of the objections which are frequently alleged against the use of mercury. One of these is, that relapses are more prone to occur, and that cases which seemed to do well at first are in the end more protracted than those which are left to nature. Now, in reply to this, I would allege that these so-called relapses are for the most part instances of delay, and thus proofs of the power of the drug. They occur when the course of medication has been too short; and in these undoubtedly the duration of the secondary stage may often be longer than in others, for the reason that it does not begin until several months after the usual time. As yet we have far under-estimated the length of treatment needful to secure immunity. In many cases counted as having been treated by mercury the period of treatment recorded was ridiculously short. It would be just as reasonable for a fireman who was in the habit of leaving off too soon to allege that pumping only tended to cause relapses of the fire. Inefficiency will always result in disappointment; and it is not the name of mercurial treatment but its reality with which we must deal, if we wish to arrive at sound conclusions.

Another objection widely entertained both by the laity and the profession concerns the fear of damage to the general health. Here, again, we have to take account of the mode of administration. Those who use the vapour bath allege that it is almost wholly free from inconveniences. I have myself been in the habit usually of giving small doses of grey powder, qualified in certain cases by minute quantities of opium or by the addition of quinine; and I can testify in the clearest manner that I scarcely ever encounter any inconvenience, either local or general. Salivation to any uncomfortable extent I scarcely ever see, and the common report at the end of a course is that the general health is excellent. Sometimes a slight loss of flesh and a

certain degree of debility are induced, but these are probably quite as much to be attributed to the disease as to the remedy, and they are always temporary. Of cases in which a cautious course of mercury has proved really injurious to the general health I have had no experience.

As regards the precise method of administration of mercury, I confess that it does not seem to me a matter of much importance, provided it be done cautiously enough. If by the mouth, the doses must be small—at any rate at first, until the degree of the patient's tolerance has been estimated. I have seen the hypodermic injection plan pursued in Paris and Berlin, but nothing which came under my observation induced me to think favourably of it. The inunction method is safe and very efficient, but it is dirty and inconvenient, and probably nothing can be said in its favour which may not be alleged with greater force of the vapour bath. This latter method, as introduced by Mr. Langston Parker and perfected by Mr. Henry Lee, is an admirable plan. Its only drawbacks are the expense and trouble which attend it. At Aix-la-Chapelle, which may, I suppose, in some sense be regarded as a better-class Lock Hospital for the north of Europe, amongst medical men of immense experience in the management of constitutional syphilis, the inunction plan still enjoys undisputed pre-eminence. From my friends, Dr. Diemer, Dr. Wetzlar, Dr. Brandis, and Dr. Ziemssen, of that place, I heard but one report: all of them believed in mercury as the one cure for syphilis, and inunction as the best method of using it.

But, Mr. President and gentlemen, inasmuch as it was quite as much my object in undertaking this paper to elicit the opinions of others as to record my own, I am warned that I must hasten to a conclusion. In order that I may not fail in clearness I will, at some risk of being accused of dogmatism, put my conclusions in a categorical shape. They are as follows:—

That mercury is probably a true vital antidote against the syphilitic virus, and that it is capable of bringing about a real cure.

That, in practice, a good many cases are really cured by mercury; the cure being proved by the restoration to good health, and, in some cases, by renewed susceptibility to contagion.

That the probability of cure depends upon the stage of development attained by the disease when the remedy is resorted to, and upon the perseverance with which it is used.

That, in order to secure the antidotal efficacy of mercury against syphilis, it is desirable to introduce a considerable quantity into the system, and to protract its use over a very long time.

That ptyalism and other evidences of the physiological action of mercury, so far from being beneficial, are, if possible, to be carefully avoided, since they prevent the sufficiently prolonged use of the remedy.

That in cases in which the patient shows an idiosyncrasy peculiarly susceptible to mercury, the indication is to reduce the dose rather than to omit the drug.

That it is impossible to begin the administration of mercury too soon, and that it should be resorted to without loss of time in all cases in which a chancre shows a tendency to indurate.

That many cases of indurated chancre, treated early by mercury, never show any of the characteristic symptoms of the secondary stage.

That in other cases of mercurial cure of the chancre, in which yet secondary symptoms do occur, they are usually milder than if allowed to develop without specific treatment.

That, when mercury does not wholly abrogate the secondary stage, it exhibits a remarkable power in delaying it.

That delayed outbreaks of secondary syphilis are to be regarded rather as proof that the administration had not been sufficiently persevering than that the remedy was not efficient.

That it is probable that the risk of tertiary symptoms is in ratio with the severity and prolonged duration of the secondary stage.

That there are some grounds for believing that the tertiary symptoms of syphilis are both less frequent and less severe in those who have been efficiently treated by mercury than in others.

That mercury, cautiously given, does not, in a great majority of instances, do any injury to the general health, and that its local inconveniences may usually be prevented.

That the doctrine of the real antidotal character of mercury, in respect to syphilis, ought to lead to much more prolonged administration of it, with the hope of destroying utterly all lingering germs of the malady.

That most collected statistics as to the duration of treatment and freedom from relapse are misleading and worse than useless, because usually the treatment was far too short to be effectual.

That it has not yet been proved that there are any special forms of syphilitic disease in which mercury ought to be avoided, although, as a general rule, it is acknowledged that it must be used with more caution in all forms which are attended by ulceration than in others.

That iodide of potassium possesses little or no efficacy against either the primary or secondary form of syphilis.

That the efficacy of mercury is often most signally proved in cases which have utterly resisted the action of iodide of potassium.

That it does not much matter whether mercury is given by the mouth, by inunction, or by the vapour bath, provided that, whichever method be selected, care be taken to avoid salivation, purging, &c.

That the doses usually resorted to for internal administration are for the most part too large, and thus often necessitate a premature discontinuance of the remedy.

That if one method of administration does not proceed satisfactorily, another should be tried; and that in no case of difficulty should the vapour bath be forgotten.

THE PROPERTIES, ACTION, AND USES OF CROTON CHLORAL HYDRATE.

BY J. BURNEY YEO, M.B., M.R.C.P.,
HON. FELLOW OF KING'S COLLEGE, ASSISTANT-PHYSICIAN TO KING'S COLLEGE AND THE BROMPTON HOSPITALS.

I.—CLINICAL OBSERVATIONS.

A NEW REMEDY introduced to us by the illustrious discoverer of chloral hydrate naturally commands our attention and interest. Such a remedy is that which Professor Liebreich has named Croton Chloral Hydrate. It is for the purpose of laying before the profession a somewhat systematic investigation, which I have been enabled to make, with regard to the action and uses of this drug that the following paper is written.

It had been stated that remarkable results were to be obtained from the administration of this drug, in *one-grain* doses, in neuralgia. On the other hand, a German physician who saw me order it in three-grain doses, for a patient in King's College Hospital, derided the smallness of the dose, and assured me that in Germany thirty-grain doses were commonly given; and it seems clear, from Professor Liebreich's own statement, that he has given it in doses of sixty grains.

It was necessary then, in the first place, to endeavour to settle the question of dose. This I hope I have succeeded in doing approximatively.

As I find this substance is very little known amongst medical men and chemists in this country, I may as well occupy a few lines in describing its chief physical properties.

Professor Liebreich tells us that it is formed when chlorine gas acts on aldehyde (C_2H_4O); and that its chemical constitution proves it to be the chlorated aldehyde of crotonic acid ($C_4H_6O_2$): so that the formula for croton chloral is ($C_4H_3Cl_3O$), that of chloral being (C_2HCl_3O).

This substance forms small glittering tabular crystals, which tend to cohere together into irregular masses, something after the manner of benzoic acid. It is light (the coherent masses float in water), sparingly soluble in cold, but more so in hot distilled water. It is easily volatilised by heat, but is tolerably permanent at ordinary temperatures. It has a penetrating, mixed camphoraceous and chlorous odour. As the question of its solution is im-

portant practically, I may mention that I have found the addition of a fourth part of glycerine to warm distilled water greatly increase its solubility. The following formula yields the strongest solution that is permanent; stronger solutions throw down a crystalline deposit on cooling:—Croton chloral hydrate, sixty-four grains; glycerine, half an ounce; warm distilled water, an ounce and a half. This gives a solution containing four grains of the drug in each fluid drachm, and having a slightly bitter and camphoraceous taste. I have also given it in pills mixed with an equal part of the confection of roses, and if these are kept in a bottle they form a very good vehicle for its administration.

The method of investigation which seemed to me the most satisfactory was a combination of direct experiment on the lower animals with clinical observations on as many and as various cases as my opportunities afforded me, having regard, of course, to a certain fitness in the cases themselves for the administration and trial of the medicine. I have had no reason to complain of my opportunities; for from a weekly observation of from 500 to 600 out-patients at King's College Hospital, and from 300 to 400 at the Brompton Hospital, together with Dr. Beale's in-patients in King's College Hospital, whom he had for a time entrusted to my care, and my own private patients, it was not difficult to select a considerable number of cases in which the efficacy of croton chloral hydrate could be fairly estimated.

In the physiological laboratory of King's College, by the kindness of Dr. Rutherford, I was enabled to carry out my observations as to the effect of this drug on certain of the lower animals.

The clinical observations being of the chief interest to us as practitioners of medicine, I shall give them precedence in the following statement.

I may divide the cases in which I have administered this drug into the following classes:—

1. To relieve neuralgic pains occurring in the course of the sensory nerves of the face—the branches of the nervus trigeminus.
2. To relieve neuralgic pains occurring in the course of any nerve.
3. To relieve diffused muscular pains.
4. In certain obscure neuroses and spasmodic affections of the nervous system.
5. To allay distressing cough in certain diseases of the respiratory organs.
6. Simply to procure sleep.

Under the first heading I may mention the following:—

CASE 1.—A married lady, with an attack of acute bronchial catarrh, of gouty diathesis, and with a weak heart, complained of severe neuralgic pains extending over the face generally. Had passed a sleepless night from the pain in the face. No carious teeth. To take a grain and a half of croton chloral hydrate every three hours until relieved. An hour and a half after the first dose the pain had disappeared, and no more of the drug was taken, as there was no return of the pain. She slept very soundly through the whole of the following night.

CASE 2.—An anæmic and somewhat hysterical young woman complained of pain coming on every evening in the region of the auriculo-temporal and external frontal nerves. She was ordered two grains of the drug, to be repeated after an hour and a half if not relieved. The first dose did not afford relief; after the second dose she fell asleep, but awoke with the pain still unmitigated. This process was twice repeated, with the same result. She was urged to double the dose, but refused on the ground of the sleepiness which followed the smaller dose.

CASE 3.—An adult male, in King's College Hospital, recovering from an attack of broncho-pneumonia, complained for two days of severe frontal neuralgia on the left side, spreading upwards over the cranium. To take two grains of croton chloral every three hours. He felt no relief until he had taken eight doses; then the pain was somewhat relieved, and he felt drowsy. After he had taken about twenty doses the pain disappeared entirely, and has not returned.

CASE 4 was reported to me by Mr. Homan, the house-physician in King's College Hospital. A patient, recovering from a mild attack of typhoid fever, complained of severe pain in the head. Three grains gave almost immediate relief.

CASE 5.—A single young woman, twenty-eight years of age, who had suffered for some months with severe spasmodic cough, probably due to disease of the bronchial glands, complained of troublesome neuralgic pains all over the face. To take two grains, and repeat it after an hour. The pains were relieved by two doses, and the severity of the cough greatly diminished.

CASE 6.—A male out-patient in King's College Hospital complained of severe neuralgic pains arising from decayed teeth. *He had had no rest at night for three weeks.* He was given five grains, and kept in the hospital for three-quarters of an hour. The pain not being then relieved, another dose of five grains was given. A quarter of an hour after the second dose the pains were quite gone. He was not sleepy. He had two doses given him to take, one on each of the following nights. Five days afterwards he reported that he had had no return of the pain.

CASE 7.—A female out-patient (King's College Hospital), sixty-three years of age, complained of neuralgic pains, extending from the right temporo-maxillary articulation to the tip of the tongue and to the infra-orbital region. To take three grains twice a day. Five days afterwards she reported that she was very much relieved.

CASE 8.—For this case I am indebted to the observations of Mr. Bartlett, of the Brompton Hospital, who has been kind enough, at my request, to make trial of this remedy in several cases. A young woman, an in-patient in the Brompton Hospital, suffered greatly from neuralgia of the face in connexion with carious teeth. She took two grains, followed after an hour by another grain. The pain was relieved, and she slept.

CASE 9.—A married female out-patient at the Brompton Hospital complained of frontal headache with sleeplessness. Nervous temperament. To take two grains every *other* night. *No* effect.

CASE 10.—Also reported to me by Mr. Homan. A male in-patient in King's College Hospital with subacute rheumatism, suffered from severe hemicrania. Five grains of croton chloral had no effect. The pain was relieved by a mixture of quinine and bicarbonate of potash.

CASE 11.—A female out-patient at King's College Hospital, aged twenty-six, had suffered from neuralgic pains in the face for three years, with frequent sleepless nights. To take two grains every hour until relieved. Was relieved after four doses, and sleeps much better.

Under my second heading I place the following:—

CASE 1.—A male out-patient at King's College Hospital complained of pains along the upper part of the course of the anterior crural nerve, coming on suddenly in severe paroxysms, and rendering him for the time unable to walk. It lasted two or three hours at a time. He was ordered two grains of croton chloral hydrate night and morning. After taking these doses for three days, he reported the pain as easier at night, but not greatly relieved during the day. As he was suffering much at the time of his second visit to the hospital, he was given five grains and kept in the hospital for an hour; at the end of that time he was much easier, but not at all sleepy. To take five grains every night. Five days afterwards he reported himself as much better. Sleeps better, and the pain is nearly gone.

CASE 2.—A male out-patient at King's College Hospital, aged forty, a baker, came with severe *throbbing* pain in the lumbar region. For a fortnight he had been unable to work, and felt severe pain in walking. He was given five grains and kept in the hospital for an hour. The pain was then easier; the *throbbing* was quite gone; he was not sleepy. To repeat the dose every night. At the end of four days he reported himself as so much better that he was able to return to his work, and walked quite well.

CASE 3.—A male out-patient at King's College Hospital with a very small and superficial painful tumour (neuroma?) in the epigastric region, from which pains darted upwards and backwards to the spine. Had applied belladonna and chloroform liniment. To take two grains of croton chloral and to repeat the dose after an hour if not relieved. Four days afterwards he stated that the pains were relieved by two doses. They returned, but not nearly so severely as before, and were always relieved by the medicine.

CASE 4.—A male out-patient at King's College Hospital, aged fifty-seven. A tedious attack of sciatica had left him with a pain in the left foot, and sleepless at night. "Has not slept for six weeks." To take two grains and a half

every night. Slept in an hour after the first dose; pains in the foot much better.

CASE 5.—A female out-patient at Brompton Hospital suffering from pleurodynia, hysterical type. To take two grains on alternate nights; no relief.

The following may fall under my third heading:—

CASE 1.—A male out-patient at King's College Hospital had suffered for four months with muscular pains across the hips and in the dorsal region, extending forwards to both sides. They came on after a prolonged gonorrhœa which lasted five months. To take two grains of croton chloral hydrate night and morning. Slept better than usual after the first and third doses; the pain somewhat relieved. To take four grains every night. After four nights he reports that the pain is gone from the hips, but there is still some pain in the dorsal region. To take six grains every night. Four days later he reports that the pain is quite gone from the hips.

CASE 2.—A male in-patient in King's College Hospital with severe rheumatic pains in all the limbs.

Jan. 6th.—2.30 P.M.: Five grains of the drug given; no effect.—10 P.M.: Five grains more were given; no effect.

7th.—10 P.M.: Five grains more were given; slept better, but is still restless.

8th.—10 P.M.: Five grains more were given; gave some relief.

CASE 3.—A male out-patient at Brompton Hospital complained of pain in the loins and legs keeping him awake at night. To take two grains of croton chloral on alternate nights. Reports that the pains are much better, and that on the nights he takes the medicine he falls asleep in twenty minutes.

In that indefinite and depressing class of cases which forms my fourth heading I have had little encouragement to proceed in my trials. I may mention, however—

CASE 1.—A male in-patient, at King's College Hospital, of a very hysterical type, was sent in as a case of chorea, but was really suffering from occasional general convulsions, which ceased if the attention of the patient was strongly diverted from himself. Five grains every night produced no effect.

CASE 2.—A lady, beyond middle-age, who had for many years suffered from nocturnal irritability of bladder, aggravated by emotional influences and by cold. Six grains at night produced no effect.

CASE 3.—Reported to me by Mr. Bartleet of the Brompton Hospital. A case of severe dysmenorrhœa was relieved by two doses of one grain each at an interval of an hour.

For the fifth class of cases I believe we have in this drug a valuable adjunct to our other remedies. Out of many in which it has proved of use I would cite the following:—

CASE 1.—A male out-patient at Brompton Hospital, aged thirty-nine, has suffered from asthma all his life. Has now a very distressing cough with great dyspnœa, which makes his nights very restless. To take two grains at bedtime. Reports after a week that the cough and dyspnœa are greatly relieved, and that he has slept much better.

CASE 2.—A female out-patient at Brompton Hospital, aged twenty-seven, with advanced phthisical disease in the left lung, suffers much from cough and sleeplessness at night, which the ordinary remedies have not relieved. To take two grains of croton chloral every night. Reports after a week that the cough is much relieved at night and she sleeps well.

CASE 3.—A male out-patient at Brompton Hospital, aged thirty-nine, with emphysema and chronic bronchitis. Cough very distressing at night, which prevents his sleeping, and throws him into a profuse perspiration. To take three grains every night. Reports that the cough and perspirations are both greatly relieved, and that he sleeps much better. I have selected these three, out of a great number, as typical cases.

I have not had opportunities of giving this drug in many cases of simple sleeplessness, and I hesitated to use it for this purpose in large doses until I had seen something of its action on the lower animals.

CASE 1.—Bearing in mind Professor Liebreich's statement that this drug did not affect the action of the heart or respiratory organs, we tried it in a case of severe cardiac disease with chronic broncho-pneumonia, in a young girl in King's College Hospital, whose symptoms were greatly aggravated by distressing wakefulness. In this case a dose of three grains was quickly followed by sleep.

CASE 2.—A gentleman who occasionally complains of sleeplessness at night, and who is in the habit of obtaining relief from a dose of ten grains of chloral hydrate with ten grains of bromide of potassium, took three grains of croton chloral, and then a grain and a half more at the end of an hour, without any effect. At his own wish he returned to his ordinary dose of chloral hydrate.

I am still continuing systematic observations on the action of this medicine in many cases, but it seemed to me highly desirable that the results that have been already obtained should be at once made known, in order that other practical observers might carry on the investigation of the action and uses of what I believe will be found a very valuable therapeutic agent; for in therapeutics, as in other things, it is "in the mouth of many witnesses" that "the truth is established."

I venture to think my clinical observations will, so far as they have gone, support the following conclusions:—

1. In croton chloral hydrate we possess a remedy of remarkable efficacy in some cases of neuralgia of the branches of the nervus trigeminus. I do not remember ever seeing a case similar to Case 6, Class 1, so completely relieved by any medicine, without producing the least drowsiness.

2. That it also has the power of affording relief in other obstinate forms of neuralgia, as shown in Cases 1, 2, 3, 4, Class 2.

3. That it is of use in certain cases of diffused muscular pain. I would call attention especially to the case of muscular pain after gonorrhœa, Case 1, Class 3. But more evidence is needed to confirm this observation.

4. That it has but little appreciable effect in purely rheumatic cases, as shown in Case 10, Class 1; Case 2, Class 3. I could have added many more cases in support of this statement.

5. That in cases of localised pain and other nervous symptoms which we find in the class of persons we are in the habit of calling hysterical, this drug is of little or no use. I would call attention, however, to the relief it afforded in a case of dysmenorrhœa (Case 3, Class 4), and suggest that those who are in the habit of seeing many such cases should give this drug a trial.

6. Its efficacy in procuring sleep seems very variable in moderate doses. Two grains will produce sleep in some sensitive females, and ten grains will fail to produce even drowsiness in unsensitive males.

7. Of its value in relieving some forms of irritative and spasmodic cough I have had abundant evidence. If I may trust to the short experience I have hitherto had of it, I should say there is scarcely any remedy that is likely to prove more valuable for the relief of the distressing night cough of chronic phthisis.

Finally, as to the dose. I am satisfied that in dealing with this substance we must give an unusually wide range to the dose, for its effects vary greatly, not only on the human subject, but also, as I shall show hereafter, on the lower animals. The doses I have given varied from one to ten grains. In delicate females I have found very decided effects from doses of two and three grains. In strong males a dose of ten grains is often required to produce any appreciable effect. As might have been expected, persons who have been accustomed to the use of anodyne medicine require larger doses than others. The dose must also be proportionate to the severity and long-continuance of the pain. I would advise that it should be always given in moderate and quickly repeated doses, until the amount of tolerance of the drug in each particular case has been discovered. In severe neuralgias, from two to five grains may be given every hour, or the smaller dose every half-hour, until fifteen grains have been taken. At present I do not think it safe to go beyond this dose. My reason for thinking so will be found in one of the experiments I shall have to narrate, when it will be seen that a dose of twelve grains, injected subcutaneously into a cat, was followed by prolonged unconsciousness, succeeded by attacks of epileptic convulsions, and death after five days. The details of these experiments I propose to reserve for another communication.

Mr. John Wood has kindly permitted me to ascertain the effect of this drug in two cases of cancer of the tongue attended with severe pain, which are now under his care in King's College Hospital, and I shall be able to report the result in my next paper.

ON THE

VALUE OF THE "BOUGIE CONDUCTRICE" IN THE TREATMENT OF NARROW STRICTURES OF THE URETHRA.

BY RUSHTON PARKER, F.R.C.S.,

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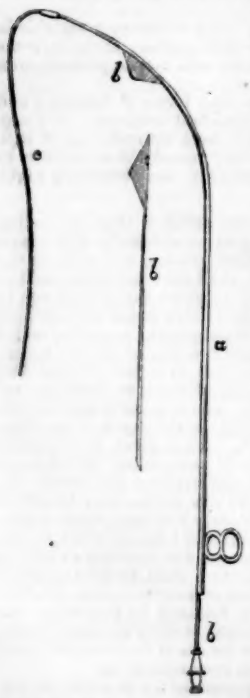
A FEW weeks ago Mr. Savory made some remarks upon the general clinical aspect of urethral stricture, and his allusion to the superaddition of spasm is a point as undeniable as it is liable to be overlooked.

With regard to the extensive employment of the recumbent posture, as a substitute for operative measures, I have no experience, and see little prospect of ever having it; for I am sure that in the majority of instances, especially those occurring in private practice, this cannot be even attempted. There are many men suffering from stricture, even of narrow dimensions, who find the malady inconvenient enough to wish it away, and who will gladly submit to anything that shall not confine them to the house for more than a week or so, but who would go on fighting with the stricture, unaided by surgery, to the detriment of bladder and kidneys perhaps, rather than suffer prolonged recumbency. They have not the leisure for it, to say nothing of strong disinclination.

It becomes, then, advisable to quickly dilate the urethra if possible, and the results of practice are eminently satisfactory, provided an occasional catheter be subsequently passed.

The instruments employed for divulsion have been brought to a high state of development both in simplicity and mechanical efficiency, and the dilator of Mr. Berkeley Hill is, in my opinion, the simplest and the best of these.

As to urethrotomes, those commonly used in England are not fine enough for immediate passage through a stricture less than the size of a No. 4 catheter—the urethra must be previously prepared by soaking in a fine catheter or bougie for a day,—so Mr. Hill has had constructed an ingenious urethrotome, which can, it seems, be employed in the tightest cases.



I wish to draw attention to the urethrotome of M. Maisonneuve, which has been in use, I am told, about eleven years, which is much simpler than that of Mr. Hill, which I find remarkably efficient and easy to work, adapted for the narrowest strictures, and which I think far the best urethrotome I have ever seen or heard of. It costs 16 francs. This instrument is best here explained by a drawing.

The sound (*a*) is of steel, hollow, split along the upper surface, and the size of a No. 2 catheter. The knife (*b*), of which I have two sizes, attached to a thin flexible arm of steel, which bends as it slides along the concavity of the sound, cuts in advancing and receding, but only along its slopes, not at the free apex, which is knobbed and very blunt, blunt enough to leave uninjured the healthy part of the urethra. The lash-like appendage (*c*) is a filiform bougie, fitted with a female screw at one end for attachment to a male screw at the tip of the sound.

The bougie is first passed, its size being that of an English No. 4 or less; then the sound is screwed on to it, and pushed *after* it, the bougie coiling up in the bladder. The knife is then run down the sound and withdrawn, the sound and bougie being pulled out next. The operation is easy, rapid, and successful, and produces neither more pain nor more bleeding than does "divulsion."

The "bougie conductrice" is used in Paris with a variety of urethrotomes and dilators; and could be adapted to Mr. Hill's dilator easily, if wished for; in any case, a small metal cap covering the screw at the tip of the sound when the bougie is not used.

The advantage of this fine appendage is that when once the filiform bougie is passed, the surgeon has only to screw to it the sound of a dilator or urethrotome, which will then be safely piloted into the bladder, and the stricture may be immediately divulsed or incised.

I have only employed Maisonneuve's urethrotome in five cases hitherto (not having long possessed the instrument); thrice with, and twice without, the bougie. All except one *required* urethrotomy, the stricture being in the penile portion; but in this one the stricture was behind the penile portion, and the split sound of Mr. Hill's dilator could not be passed, while a "bougie filiforme" went easily, and so the operation was concluded with Maisonneuve's urethrotome, as I have not had the dilator fitted for bougies.

The details of my cases are not given, nothing occurring but what is ordinary. None of the patients were in bed more than a week, and some might well have been less; while one, a ship's officer, was up in two days, and out daily after five days, feeling quite well and urinating in comfort. The strictures were very small in size and of some years' duration, and varied from one to three in number in each patient. Following Mr. Hill's practice, I never tie in a catheter after uncomplicated divulsion or internal incision, nor have I had reason to regret the omission.

In cases, then, requiring rapid dilatation, I should say, "incise *all, if you like*, with Maisonneuve's urethrotome; for *some* divulsion *may* be used with equal but not greater advantage."

Liverpool.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

A SERIES OF CASES OF COMPOUND FRACTURES, SUCCESSFULLY TREATED ON CONSERVATIVE PRINCIPLES.

(Under the care of Mr. CALLENDER.)

THIS week we are able to publish only two of the four cases of compound fracture which were recently simultaneously under treatment in Harley ward. In three of the cases the injuries were so severe that at first the question of amputation was raised. Fortunately, it was decided that an attempt should be made to save the limbs, and in each instance success followed. If it can be shown that such results may reasonably be expected in all similar cases, and that in these instances the successful issues were not chiefly due to the operation of accidental favourable circumstances, it would appear that a great blow has been dealt to the opponents of large surgical hospitals. It is only just to remark that this series of cases may be taken as representing the average success which Mr. Callender has obtained for a long time past.

For the notes of the following cases we are indebted to Mr. E. Jepson, house-surgeon.

Compound fracture of the entire lower third of the humerus extending into the elbow-joint.—On May 3rd, as David M——, aged thirty-two, was engaged in taking down some piping from outside a house, he lost his hold and fell from a height

of fifteen feet upon some pieces of iron with his left elbow underneath him. On admission he was found to have sustained a compound fracture of the left humerus. The lower third of the bone was broken into many pieces, and the finger could be passed into a wound on the outer side of the arm, just above the elbow, across the broken fragments, and into the joint. There was some hæmorrhage, for the arrest of which the wound was plugged with strips of lint soaked in carbolised oil. Mr. Callender, who was sent for, decided, after cleansing the injured parts with carbolic-acid lotion, to endeavour to save the limb. The arm was therefore placed on an angular splint, interrupted at the elbow, and furnished with outriggers, and was swung with a shot-case counter-weight. The wound, plugged as already mentioned, was covered with carbolised oil on lint, and over this was laid a thick layer of cotton-wool. The patient had further suffered from a sprain of the right wrist, and from a contused wound just below the left knee. Three days after admission there was a return of the hæmorrhage, but this was finally stopped by renewal of the plugging. On May 12th some inflammation of the arm occurred, leading to slight suppuration. This rapidly subsided, and the health improved, so that the patient was convalescent eight weeks after admission. He had, however, a return of inflammation, which lasted a week, and was due to the casting off of some small pieces of necrosed bone, four of which were removed whilst he was under the influence of nitrous oxide. On November 20th he was sent to the Convalescent Hospital, some sinuses in the arm still being open, evidently indicating that some necrosed fragments had yet to come away. There was some movement at the elbow-joint, and the prospects of further improvement are very considerable.

Compound fracture of the right astragalus and comminuted fracture of the tibia and fibula, extending into the ankle and into some of the tarsal joints.—Charles J——, aged thirty-eight, was standing on a ladder about twelve feet from the ground, when the ladder gave way, and he fell with it, his right foot being entangled between the rounds. When admitted, on May 4th, it was found that he had sustained the severe injury above mentioned; but at first the bruised and discoloured skin covered the astragalus, which was dislocated to the inner side, where it was immovably fixed. But it was evident that this integument was irreparably damaged, and, in fact, in the course of forty-eight hours, it died and began to separate, by which means the fracture was converted into a compound one. The limb was placed in a "Neville" splint, supported by interrupted side-splints, and the wound was systematically washed out with carbolic-acid lotion and covered with carbolised oil on lint and cotton-wool. The patient subsequently suffered from considerable constitutional disturbance from cellular inflammation limited at the femoral glands. Five weeks after his admission the larger portion of the astragalus, having necrosed and become loosened, was removed from the wound. It was not until three months later that it was considered safe to take the limb from its splints. The patient was by this time convalescent, but for two months longer he was kept in the hospital, and the nutrition of the limb and the tone of its muscles were greatly improved by the local use of the continued electric current. He was discharged on the Nov. 20th.

GUY'S HOSPITAL.

CASES OF COLOTOMY.

(Under the care of Mr. BRYANT.)

THE following case concludes a series of colotomies which have recently been under the care of Mr. Bryant. The importance of keeping the rectum empty in all cases in which there are fistulæ is well illustrated in the subjoined case, in which fæcal matter had entered the sinuses and given rise to extensive diffuse inflammation and suppuration in the cellular tissue about the buttocks and perineum. For the subjoined notes we are indebted to Mr. C. J. Symonds.

The patient in the following case was a woman aged twenty-four, who had been comparatively healthy up to a year before admission, when she began to feel ill and weak, and had trouble in passing her motions, which were small and hard. Five months before admission her bowels were much relaxed, and she passed clots of blood at times. She has been gradually growing weaker, the motions being small and the bowels loose. The patient is married, and has had one child, which lived fourteen days, and one miscarriage six months previous to her present trouble. The history points pretty clearly to syphilis.

On admission the patient was pale and anxious, very weak and emaciated. There was an offensive discharge from the rectum and from a fistula in right buttock. On examination Mr. Bryant found a recto-vaginal and an anal fistula, with stricture and ulceration of the rectum. The stricture just admitted the tip of the finger.

September 2nd.—Patient being fully under chloroform, colotomy was performed by Mr. Bryant.

3rd.—Not much of the motion comes by the wound.

5th.—No pain. Patient seems much better. Abdomen is not tense; there is no pain on pressure. Not much passes by the wound at present. Temperature 98·7°; pulse 120. Appetite fair.

15th.—Patient is improving in health, but the motions come almost entirely per rectum.

16th.—In a good deal of pain, owing to motion coming per rectum. The wound looks red at the edges, and the opening seems small.

26th.—The motions have come by the side for the last six days, and patient feels much better in consequence. There is always a purulent discharge from the rectum.

October 9th.—A solution of permanganate of potash was passed in at the side to clear out the lower passage. The motions have been coming per rectum again during the last week.

18th.—Motion comes by rectum, giving great pain. After this the pulse rose to 136, and the temperature to 104°.

26th.—There has been no prolapse of the bowel until a week ago, since which the side has acted well. Pus still comes by the rectum.

Nov. 10th.—On examination by Mr. Bryant, the rectum was found to have healed, but was contracting. The fistula on right buttock opened above stricture. A probe could be passed from the anal into the recto-vaginal fistula.

26th.—There is much pain and swelling in the right thigh, and redness about the groin; this has been coming on for two or three days, the temperature rising to 103°.

27th.—Chloroform being administered, a swelling was found on outer side of, and around the anal fistula. On introducing his finger into the rectum, Mr. Bryant felt a mass of fæcal matter just above the stricture, completely closing it. A bistoury was introduced into the fistula, and carried outwards for two inches and a half, laying open a large sinus containing pus of fæcal odour. This sinus communicated indirectly by many smaller ones with the rectum. The vagina and rectum had completely healed.

From this time the motions came regularly by the side, and the patient progressed favourably.

ST. LEONARD'S HOSPITAL, SUDBURY.

TURPENTINE IN PYÆMIA; RECOVERY.

(Under the care of Dr. J. SINCLAIR HOLDEN.)

THE patient was a workman on the Great Eastern Railway, who sustained a severe laceration with fracture of two metacarpal bones, from the passage of a truck-wheel over his hand. A few days after the necessary operation, in which an effort was made to save some of the fingers, gangrene set in, and a secondary operation was performed above the wrist. This was shortly followed by rigors, profuse sweats, sleeplessness, low delirium, subsultus, and stupor, the wound becoming sloughy and offensive. In spite of free stimulation the man was evidently rapidly sinking under the fatal disease—pyæmia. As a *dernier ressort*, half-drachm doses of turpentine were administered in egg emulsion every four hours. After the third dose it was discontinued, as a remarkable improvement had taken place: the pulse and the temperature had fallen, the consciousness returned, and the patient took liberally of brandy and beef-tea. The favourable change was, however, of brief duration, as the day following all the asthenic symptoms reappeared, and the patient relapsed into a comatose condition. The turpentine was again had recourse to in

the same doses, and with the same happy effect; but this time the improvement was permanent. All other danger passed by, and the patient made an excellent recovery.

During the height of the attack the sound arm became much swollen and suspicious-looking of purulent mischief. This subsided from the commencement of the turpentine treatment. No abscess formed. Under carbolic-oil dressings the wound granulated rapidly, and the man was soon able to be out.

That the antiseptic and stimulating effect of the turpentine was the means of rescuing this patient from a fatal disease seemed so apparent that it is worthy of more extensive trial in hospitals, where pyæmia so often adds to the mortality after operation.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

DR. S. O. HABERSHON, F.R.C.P., PRESIDENT, IN THE CHAIR.

MR. GANT brought forward the case of a young woman, aged twenty-nine, from whom he had excised the antrum of the upper jaw for a cystic growth. About eight years ago she felt a small lump about the size of a Spanish nut high up in the left cheek; this increased in size, and she suffered from neuralgic pains in the face. When admitted into the Royal Free Hospital the tumour presented a double swelling, partly in the cheek and partly under the lip, projecting down to the teeth. Mr. Gant then diagnosed the cystic growth in and protruding from the antrum. He made an incision from the nasal process of the jaw downwards, and carried it around the ala of the nose and through the middle line of the lip. The cheek was then readily reflected, and the tumour exposed. He then removed the whole of the antrum with cutting-pliers from the second incision to the last molar tooth, leaving the infraorbital nerve above untouched. The incision was accurately closed with hare-lip pins. These were withdrawn on the fifth day, primary union having taken place. The patient was shown to the Society, and now, two months after the operation, can speak distinctly and eat without inconvenience, and the face presents no disfigurement. The tumour, when removed, was apparently a fibro-cystic growth.

Mr. SEWILL said most of the cysts were of dentigerous origin. He exhibited some models illustrating the pathology of the cases. Removal of the offending teeth was often sufficient for the cure of these maladies.

Mr. BRYANT criticised the operation as being more serious than the disease required. He thought these cysts should be opened beneath the cheek, whether of simple or of dentigerous origin.

Mr. BRUDENELL CARTER asked whether Mr. Gant had heard of the operation lately performed by Mr. Warrington Haward, which consisted of completely raising the whole face, which enabled the operator to remove necrosed bone from the nasal fossæ with the greatest facility.

Mr. GANT, replying, said the cyst was not dentigerous. With reference to Mr. Bryant's remarks, he would say that the disease was more a cystic growth than a cyst. He had repeatedly punctured cysts, but in this case he thought the removal of the bone itself was called for.

Mr. BRYANT, after this, qualified his remarks.

Dr. LICHTENBERG showed a patient on whom he performed a rhinoplastic operation. The patient, aged sixteen, had suffered from lupus for ten years, had been under treatment at various hospitals, and when admitted into the Tottenham Hospital presented the appearance shown in the drawing he exhibited, having lost the entire cartilaginous part of the nose, with the exception of a minute part of the left ala. Dr. Lichtenberg administered iodide of potassium without any good effect, and then performed the operation first introduced into this country by Prof. Volkmann, of Halle. On the 31st of last July he performed the rhinoplastic operation, taking the flap from the right side of the forehead. On Nov. 6th he removed the knob of twisted skin, together with a large part of the bridge of the nose, by two oval incisions. This improved the appearance, and the septum, which was originally three-quarters of an inch, overlapped the groove in the upper lip to the right and left of it considerably. This he detached from the lip up to the groove on both side, and having pared and thinned the naturally hypertrophied small flaps, turned them inwards towards the cavity of the nose, and put a strong pin through them, made for the purpose, one end of which had a flat broad head, and the other constructed to screw up the septum to the tightness required. In three days the pin was removed, and the operation was complete.

The PRESIDENT congratulated Dr. Lichtenberg on the excellent appearance of the patient.

Mr. BRYANT, joining in the congratulation, said that it was most desirable not to spare the integument during the operation, and exhibited a drawing of a patient on whom he had operated with success. In this case the patient regained smell, which he had lost for many years, and he would ask, was this due to cessation of free exposure of the mucous membrane to the air?

Mr. BRUDENELL CARTER mentioned a curious case, in which he found it necessary to encroach somewhat on the hairy scalp for flap, and in which the hair grew at the end of the nose until after the patient, a female, was married.

Mr. HUGHLINGS JACKSON brought forward, in conjunction with Mr. BRUDENELL CARTER, a case of Double Optic Neuritis, in which vision was perfect. Mr. Carter illustrated the case in one of the Society's withdrawing rooms.

Mr. GANT asked what was the pathology of the case?

Mr. DE MÉRIC asked what was the prognosis of the case and the relation of the fits to the eye dimness.

Mr. SPENCER WATSON said the optic nerve presented a remarkable case of neuritis. He asked if those parts of the retina not in the immediate neighbourhood of the optic nerve had been examined? Had Dr. Jackson any theory as to the nature of these cases?

Dr. HUGHLINGS JACKSON was not inclined to express any confident opinion as to the way in which intra-cranial tumours and other adventitious products led to changes in the optic nerves, but supposed that in many cases the changes resulted by vaso-motor action. As to prognosis in the case he supposed the abnormal appearances would pass away, sight continuing. He had now seen recovery from a good many cases of optic neuritis, there being no amaurosis at any stage of it. He urged the use of the ophthalmoscope in all cases of severe brain disease, and especially when there was severe headache. He believed that severe optic neuritis, with much deficiency of sight, was more likely to result when much grey matter was affected by tumours. In every case of recovery from optic neuritis he had seen, very large doses of iodide of potassium had been given; he could not say what would result if no treatment were adopted.

Mr. BRUDENELL CARTER said the case brought forward belonged to a very interesting class, which ophthalmic surgeons seldom saw, on account of the absence of any impairment of vision; but they saw many cases exactly similar in appearance, in which marked impairment of vision was present, as he believed, from the beginning; and it was a curious question in what the difference between the two classes consisted. The word neuritis was accepted, but he doubted whether there was sufficient ground for considering the state to be inflammatory; probably it was often the result of an impediment to the exit of venous blood, and was due to distension and varicosity of veins, with consecutive œdema, rather than inflammation. This condition, if limited to the internal or fibrous layer of the retina, might not affect vision unless the fluid contents of the eyeball were increased in a degree sufficient to compress the fibres and to impair their conducting power, or to compress the percipient nerve elements of the external layer. Possibly the difference between the cases in which vision was unaffected might be essentially a difference of tension, but even in the former cases sight was liable to be impaired, or even lost eventually, from the supervention of atrophic changes, possibly due to the check to the nutrition of the parts produced by the arrest of circulation. As for the general state of the field of vision, its limits would always be curtailed when tension was much increased, and in the case just shown there must be scattered blind spots corresponding with patches of hæmorrhage. Mr. Watson's suggestion about the normal blind spot was one that had often occurred to him, and some time ago he constructed a perimeter especially to examine into this point. He found,

however, that the normal blind spot defied measurement, because the sensitive portions of the retina in its immediate neighbourhood became quickly exhausted and torpid to visual impressions. They thus were soon merged, so to speak, in the true blind spot, which appeared to increase in size in every direction as soon as the eye was a little tired. Besides this there were only a few patients whose power of observation was sufficiently cultivated to enable them to watch their own sensations with accuracy.

Mr. ROYES BELL showed a case of Necrosis of Orbital Arch followed by eversion of upper eyelid. M. F——, aged sixteen, was first seen for a severe attack of erysipelas brought on by cold. Considerable subpericranial suppuration ensued, and free incisions were made to let out pus. These eventually healed, with the exception of one over the left eyebrow, which has continued to discharge ever since. Three weeks ago she felt the bone to move; a probe was passed along the sinus, and a great extent of loose bone was discovered. Her general health was good; no headache; no strabismus. On Sept. 3rd a large piece of necrosed bone was removed. This comprised the left supra-orbital arch of the frontal bone, from the external angular process to nearly the internal, extending upwards to nearly the superciliary ridge, and backwards involving a portion of the orbital plate of the bone. The wound healed rapidly, and the girl was made an out-patient on September 9th, six days after the operation. She came about the close of October, when the eyelid was drawn up and slightly everted by the cicatricial contraction, but more by the falling in of the part that had taken place. The contraction increased, and, being readmitted on Oct. 31st, Mr. Bell the next day made an attempt to remedy the deformity. The patient was shown.

Dr. WILTSHIRE showed for Dr. DIVER a Deformed Fœtus. Dr. Part and Mr. Henry de Méric were appointed a committee to report on the specimen.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JAN. 7TH, 1874.

DR. E. J. TILT, PRESIDENT, IN THE CHAIR.

THE following gentlemen were elected fellows of the Society:—Jas. E. Gibson, M.R.C.S. (Cowes), Thos. Rowan, L.R.C.P. Ed. (Melbourne), and Thomas Underhill, M.D. (West Bromwich.)

Dr. AVELING exhibited a Clitoris, symmetrically hypertrophied, which he removed from a patient, aged twenty-seven, in the Chelsea Hospital for Women. It measured 2½ inches in length, and the circumference of the glans was 1¾ inch. So much irritation was caused even by the dress of the patient touching it that her life was rendered miserable.

Dr. WILTSHIRE inquired if there was any history of syphilis. He had removed the organ in a case of great hypertrophy from that disease. It was as large as a small cocoa-nut, and weighed 1¼ lb. The surface presented a tuberculated aspect like elephantiasis.

Dr. SAVAGE thought such cases should be called "elephantiasis."

Dr. CLEVELAND exhibited a five-months' Fœtus, which presented the peculiarity of intense congestion, amounting to dark-blueness of the head and neck. The mother was a multipara with large pelvis, and there was no evidence of pressure. There was no mark of decomposition, and she thought she had felt movement a few hours before expulsion. On removing the scalp there was found general diffused ecchymosis on the cranial surface, but no effusion or abnormal appearance of the brain.

Dr. HEYWOOD SMITH exhibited a Fœtus and Double Placenta presenting the following characteristics:—The fœtus was of about three months' growth, flattened, and curved laterally. The convex side had been pressed against the concave walls of the uterus, and the concavity formed by pressure from the growth of another fœtus which grew to maturity. The lower extremities flexed upon the abdomen had produced absorption of its contents. The placenta, that of ordinary twin pregnancy, presented the following features:—One part was fully developed, the line of demarcation was plain, and the other portion, about a fifth or sixth of the whole mass, was atrophied, consolidated, and flattened, thinned out towards its free margin, and curved to accommodate it to the pressure of the living child. The mother had had thirteen previous pregnancies, of which four had been abortions. She passed the flattened fœtus about 8 A.M. one morning, and continued to be about in her room, and at 12.50 P.M. on the same day was delivered of a living male child.

Dr. EDIS read a paper

ON THE NECESSITY FOR CAUTION IN THE EMPLOYMENT OF INTRA-UTERINE STEMS.

He brought forward some cases at Dr. Routh's suggestion, the object being, not to advocate the entire disuse of such means, but rather to impress forcibly the desirability of extreme caution in their use, and further to prolong discussion on what some look upon as a necessary method of treatment. Dr. Edis urged preliminary treatment, and supervision of patients wearing stems. Dilatation by means of graduated bougies he found to answer the purpose in the majority of cases. Notes of several cases were given, illustrating the danger of intra-uterine stems.

Dr. SAVAGE said if any precautions could ensure against the evils so often following the employment of intra-uterine stems, those insisted on in Dr. Routh's paper ought to prove effective; but would the clinical history of cases so treated warrant this conclusion? Uterine tolerance was a very capricious affair. The art of bringing the uterus into a condition ensuring immunity when subjected to treatment of this sort he feared had yet to be acquired. Until prolonged experience had tested Dr. Routh's position, no pains should be spared to impress on the minds of those proposing to enter on this line of treatment the uncertainty of morbid uterine reactions. A patient wearing an intra-uterine stem, pessary, or tent, should never be long out of view. Remarkable variations in regard of uterine tolerance were exhibited by cases wherein no apparently special dissimilarity could account for them. Dr. Savage mentioned illustrative cases. Seven fatal cases had been brought under his notice. He thought the experience of others would furnish similar results. When these machines could be tolerated there was no denying they afforded much comfort, but they might be tolerated for a long or short time, and then suddenly severe pelvic mischief might supervene. In such cases, under a mistaken impression, stems of different kinds have been substituted, only to aggravate the symptoms and add new troubles. Dr. Edis's cases went far to justify his observations. Certain anomalies of conformation defied all kinds, stem or other treatment; stems, of whatever kind, should never be used without frequent watching, as they were always attended with risk.

Dr. ROUTH, in reply to Dr. Savage, admitted that he had seen evil results from the use of sea tangle before he prepared such stems in disinfectants.

Mr. SCOTT, in corroboration of Dr. Savage's remarks, considered one of the dangers incidental to the use of intra-uterine stems was, that in some cases they were worn with impunity for several weeks, when suddenly, from some cause frequently so slight as to have escaped observation, metro-peritonitis or cellulitis set in, thereby endangering the life of the patient.

Dr. BANTOCK regretted he had not heard Dr. Routh's paper, and had only heard the concluding sentences of Dr. Edis's paper. He gathered that Dr. Edis objected to the use of stems without preparatory treatment. To a certain extent he agreed with this, and would not employ a stem in acute congestion of the uterus. He gave the particulars of a case in which he had used a stem with benefit. He objected to the use of a stem immediately after division of the cervix. He was in the habit of passing his stem in the out-patient department of the Samaritan Hospital, and in no case as yet had he seen untoward results.

Dr. HEYWOOD SMITH wished again, as at the former discussion, to urge strongly the advisability of local depletion of the uterus before proceeding to the introduction of any intra-uterine stem. With regard to dilatation of the cervical canal, it was easy to dilate the cervix with graduated sounds, but after a time the cervix returned, like india-rubber, to its abnormal state. He considered it essential to permanent relief that, whether by incision through the whole length of the canal, or by forcible dilatation, or by both, the lining membrane should be torn through and maintained afterwards in an extended condition, to prevent

its closing again. In answer to a question by Dr. Savage, he said he had seen benefit follow the use of Dr. Greenhalgh's spring stem.

Dr. ROUTH made a few remarks, and Dr. EDIS briefly replied.

The annual meeting for the election of officers, and other business, then commenced. Dr. Charles Carter and Dr. Godson, the scrutineers of the ballot, declared that the gentlemen whose names had been submitted to the Fellows in the printed list were unanimously elected. The report of the treasurer, Dr. Murray, was read and cordially adopted. It showed that the finances of the Society were in a very satisfactory condition. The report of the honorary librarian, Dr. Wiltshire, was also cordially adopted. Dr. Wiltshire mentioned that Dr. Day, a member of the Council, had presented the Society with a very handsome microscope for the library. On the motion of the President, a warm vote of thanks was accorded to Dr. Day for his handsome gift. Dr. Cleveland, in supporting the vote of thanks to the hon. librarian, asked whether a volume of reference, as an index to the Transactions, could not be issued? The President then delivered an address, which has already appeared in our columns.

CLINICAL SOCIETY OF LONDON.

FRIDAY, JANUARY 23RD, 1874.

MR. PRESCOTT HEWETT, PRESIDENT, IN THE CHAIR.

THE PRESIDENT delivered a most interesting and instructive address, which will be found at length in another column.

Mr. JONATHAN HUTCHINSON said that he commenced the discussion with some diffidence, but was anxious to state his experiences of pyæmia with reference to the lower animals. During the last two or three years he had watched its rise and progress in animals of his own rearing, none of which were in crowded quarters, but under specially favourable hygienic conditions in every respect; but they were attacked with the disease, which in many instances proved fatal. He also instanced the case of a countryman in very robust health, who was bitten by a calf, and was the subject successively of a thecal abscess, pyæmia, and abscesses in the hip-joint and leg, dying eventually from exhaustion. Another case of pyæmia occurred on the Surrey hills, from the bite of a ferret, which ended fatally in eight days. These and other experiences that he had lately gleaned led him to the following conclusions:—(1) That hospital air has very little to do with the causation of pyæmia. (2) That pyæmia is intimately connected with affections of the bones and of the venous system, periostitis being in a large proportion of cases the starting-point of the disease, or small punctures in which veins are wounded. (3) That conclusions as to the influence of hospital air are premature, for whereas he had seen many fatal cases of pyæmia in the London Hospital, he had never lost a patient in the wards of the Metropolitan Free from this disease. (4) That, according to his belief, ventilation is of no use at all; that it is as rational to endeavour to prevent pyæmia by ventilating wards as to ventilate fields in order to prevent the growth of thistles, and that erysipelas was frequently caused by such so-called hygienic arrangements.

Mr. BRUDENELL CARTER asked if some of the senior members would give their experience of pyæmia in connexion with venesection.

Mr. CHARLES HAWKINS was glad as a visitor to have the opportunity of recording his experience of the disease, extending over more than twenty years. He quoted the case of a gentleman who, having fractured his leg in Rotten-row, was placed in a new ward in St. George's Hospital, with 12,000 cubic feet of air, and all possible dietetic and nursing comforts, and who died of pyæmia three weeks after admission. A man in the next ward, with an allowance of 1200 cubic feet of air, was admitted about the same time with fractures of the skull, jaw, and thigh, but recovered without any bad symptoms. The records of Mr. Morley's Convalescent Hospital at Wimbledon show that patients die there of pyæmia as well as in London.

Sir JAMES PAGET remarked that the conditions under which operations were performed, and their subsequent surroundings in hospitals, as compared with private practice, were altogether different, and hence hardly comparable. Having regard to the deductions that should be made with respect to the various classes of persons dealt with, he had come to the conclusion that there was no marked difference as to pyæmia in private as compared with public practice, except, of course, that the well-fed were *ab initio* more likely to do well than those who were in a normal state of semi-starvation. In private as compared with hospital practice he had seen trivial causes, as chilblains, chafes, piles, &c., the forerunners of pyæmia, such cases being fatal. Indeed, there was no reason to think that hospital operations were more subject to pyæmia, but rather the reverse. Of six cases of gangrene in his own practice, the subjects of three were private patients living in a very good quarter of town, and three occurred in hospital, and he believed that there was nothing at all in a well-arranged hospital to produce or perpetuate pyæmia, except perhaps the carelessness of a house-surgeon or of the superintendent sister. In reply to Mr. Carter's query, Sir James remarked that, having had during his pupilage a large practice in bleeding every "spring and fall," he did not remember as a consequence a single case of pyæmia.

Dr. BARNES rose to place on record experiences of the *Dreadnought* hospital-ship as to the disease, and mentioned that during the time that Mr. Tudor was in office as surgeon the use of sponges was strictly prohibited, fresh "swabs" of tow being used in each and every dressing, and hospital gangrene diminished. In his own special line of practice, he disagreed with Sir James Paget as to pyæmia not being often excited in hospitals, having been frequently horrified at the promiscuous way in which fingers, perhaps fresh from other dressings, were poked into wounds, particularly in cases of ovariotomy. There was no doubt, however, that autogenetic fever would sometimes arise when veins were implicated, and he considered that the uterine veins are peculiarly liable to be affected by foul matter.

Mr. CAMPBELL DE MORGAN reminded the Society that the particulars of two conditions were being discussed together—the way in which pyæmia originates, as well as its propagation or perpetuation; the latter condition, of course, occurring when patients, as in hospitals, were herded together, although under these circumstances the same cause might produce several cases. He cited an instance in private practice where the disease existed in what was presumed to be one of a specially healthy row of houses; but smells and eventually a bad system of drainage were discovered. He mentioned the well-known fact in connexion with a particular window at the Middlesex Hospital, the wounds close to which nearly always did badly, because the window was near a foul dust-heap. The dust-heap was removed, and the cases did well; and when the heap had some time after been inadvertently allowed to collect again, erysipelas reappeared. He was very sceptical as to the harm said to be done to wounds by the action of air. He liked plenty of air; for all pent-up matter was bad, and anything that had a septic tendency was allied to pyæmia.

Mr. BRYANT did not think it proper to term pyæmia a hospital disease, inasmuch as, according to his own belief, most of the cases admitted into Guy's Hospital came there with symptoms of the affection upon them. He found also that post-mortem examinations showed that the most extensive mischief occurred in the internal organs after trivial cases; that since the plan had been adopted at Guy's of devoting a particular ward exclusively to erysipelas, it was found that two-thirds of the cases admitted into that ward came from outside, and were not sent there from other wards in the hospital. He agreed with Dr. Barnes as to the main points, but still argued emphatically that pyæmia was not a hospital disease.

Mr. TIMOTHY HOLMES, having been anxious some time ago to test crucially the effects of hospital air in the production of pyæmia, commenced to perform two series of operations severally at St. George's Hospital and at the convalescent establishment in connexion with it at Wimbledon. Two sent to the latter institution, cases of amputation, were located in separate wards, no other patients being near. Both died, one from pyæmia on the seventh day, and the other from erysipelas on the fifth day, with extensive sloughing of the back.

Mr. JOHN CROFT, having had five years resident work on the *Dreadnought*, did not subscribe to the remarks of Dr. Barnes, inasmuch as both Mr. Busk and the late Dr. Rooke, both of whom were in office there for many years, did all

that could be done, both surgically and hygienically, but the disease was nearly always prevalent in a greater or lesser degree. He agreed with Sir James Paget, that the word hospitalism had far better be dropped altogether, and urged at length, that in order to elucidate scientifically further experiences of this disease, more pains should be taken in recording the particulars of each case as to the fluids of the body, the lymph, the blood, &c.

At this point, as the legitimate time was already spent, Dr. CHARLTON BASTIAN proposed, and Mr. JONATHAN HUTCHINSON seconded, the adjournment of the debate, which was unanimously agreed to. The debate on this interesting subject therefore stands adjourned until Friday, the 13th of February next.

Reviews and Notices of Books.

Handbook for Hospital Sisters. By FLORENCE S. LEES, Superintendent of the Ambulance of H.I. and R.H. the Crown Princess of Germany and Prussia for the Wounded in the late French and German War. Edited by HENRY W. ACLAND, M.D., F.R.S., Regius Professor of Medicine in the University of Oxford, and Honorary Physician to H.R.H. the Prince of Wales. London: W. Isbister and Co. 1874.

THE title of this book will be, or should be, attractive to many of our readers, and specially to that large section of them who are, either as seniors or juniors, directly engaged in hospital work. Since the Crimean war, when Miss Nightingale, by her heroic and untiring exertions among our sick and wounded, showed that nursing is an art little known, requiring in its acquisition great ability, industry, and precision, and in its exercise great patience, tenderness, and forethought, the minds of many women, both of high and low degree, have been led or educated to the desire of making themselves useful in this particular sphere of life. The book before us takes note briefly and parenthetically of the time when our nurses were recruited from those classes who had failed more or less conspicuously in all other kinds of useful work. But it is not so now. Volunteers of gentle birth abound, and women of other classes, doubtless inspired to emulate the noble example of Miss Nightingale, have chosen as a calling one of the most arduous that can be successfully practised by the gentler sex. Hence we were curious to know the standard of excellence indicated by the accomplished authoress of this book, the more so because the varied experiences acquired by Miss Lees have been gained very practically indeed, and because the name of the editor is a sort of guarantee for the value of the subject-matter contained in this handbook.

The preface, written by Dr. Acland, contains some valuable notes on the importance of good nursing, and the means to be adopted in way of obtaining it, and he suggests among other means that "in every county where there is a good hospital some effort should be made for teaching nurses, and for the maintenance of a nursing staff for use in the district."

The body of the book is divided into nineteen sections, four of which are devoted to training, nine to ward duties, and one severally to operations, fevers, eruptive fevers, and antiseptics and disinfectants. The chapters on training are very carefully and elaborately written, including minute directions as to wearing apparel, order and method, &c., and pertinent references are made to that still too well-known personification of chaos and confusion "the nurse's cupboard." Habits of observation and discipline are treated, and useful hints given as to the ornamentation of hospital wards. The second chapter, which treats specially of the educational process, includes many valuable quotations from Miss Nightingale's Notes, and enumerates thirteen distinct subjects in which probationers are required to become skilful; as, for example, the application of leeches internally and externally, the best method of friction to the body and extremities, ventilation, observations as to secretions, expectoration, pulse, skin, appetite, intelligence (as delirium or stupor), breathing, sleep, state of wounds, eruptions, formation of matter, effect of diet or of stimulants and of medicines, and the management of convalescents. The method of instruction of the probationer by the sister includes name and position of the chief bones and arteries of the body, application of trusses, use of catheter, use of clinical thermometer, and abbreviations used in medicine. In addition to these and other analogous requirements, such as bandaging, &c., it is recommended that a course of hygiene, chemistry, or botany, should be attended, and that at all events "a knowledge of one subject in natural science, tested by examination, should be held a *sine qud non* for any one desirous of being a superintendent," as well as "a reasonable knowledge of anatomy, physiology, and the classification of disease." We must pass over without comment the chapters descriptive of the teaching pursued at the Val de Grâce, which the authoress attended, and that on the management of a hospital linenry, the latter of which, as far as we are competent to judge, being very lucid and complete. The section devoted to a description of ward duties is of course superlatively important, and in many particulars excellently written. "A locker without sides" is an almost incomprehensible article, and certainly non-existent, but we presume that a piece of furniture something similar to a "what-not" is meant to be indicated, and such an arrangement at the bedside would be decidedly preferable to the abominable hospital-locker still in use, the "horrible fustiness" of which the writer properly comments upon. When bedpans have been used, removed, emptied, and cleansed, a small quantity of carbolic acid, or some other so-called disinfectant, should always be put into them before they are returned to the ward. This practice is very important in special cases, but is useful in all, and should be universally enjoined. The injunctions as to the supervision of closets is most important, and happy is the hospital possessing a staff of sisters who will obey them. In the matter of towels it is recorded that "there should be one towel to each patient, hung on two pegs in the lavatory." If two pegs, the towel should have two loops. The notes about bedsores are good, but, as we take it, bedsores are best prevented in medical cases, and specially in fevers, by keeping an extra bed vacant, wheeling the two close to each other, and carefully moving the patient, after the body-linen has been changed, about twice or thrice a week, or as often as is practicable. In criticising skilled nursing, of course we mean "skilled" moving. It would be well in this chapter if attention was directed in cases of fever, cholera, and other diseases, to the importance of putting the foul linen into some disinfectant before removing it from the ward. Beds, bed-making, mattresses, draw-sheets, and under-sheets, are all treated of seriatim, and it is very properly observed that "the sister of the ward should always see that the severe cases receive stimulants if the patient is taking any, or nourishment of some kind, immediately before or after his sheets are changed." In the matter of waterproofing, it would be well to hint at the advisability of examining the mattresses and the linen below at sundry times, for how often have we found, on such an inspection, that the "wet" had "somehow" found its way under the mackintosh. We believe, also, that in most helpless and incurably "wet" cases, a straw mattress, changed every twelve or twenty-four hours, is better and cleaner than any other. Very excellent directions are given as to the administering of medicines, hot-air baths, poultices,

applications of ice, leeching and blistering, as well as two or three other matters that would seem rather to trench upon the province of the resident medical officer. Lithotomy, lithotrity, hernia, and ovariotomy are somewhat curiously, and, as we think, unnecessarily, singled out for special attention; but some of the notes on fevers are good, and are properly made special, although, until readers understand clearly the diagnostic signs of remittent fever, or the difference between papules and pustules, it is undesirable to complicate directions by alluding to them.

The chapter on Antiseptics and Disinfectants is fragmentary and unsatisfactory, and the kind to be used, as well as the various modes of application, had always better be left to the discretion of the medical officers. There are several important appendices, and notably one by Dr. Acland "On Studying Cases, and Reporting on them," which, as we think, should be put before a young nurse only when she is very much advanced in the practical knowledge of her duties.

The standard of excellence aimed at in this book is, of course, high, and rightly so; and we have, as it is hoped, explained enough to show that the work is well worthy of perusal by all interested in hospital nursing. Many of our readers would perhaps be disposed to argue that if the standard indicated were ever reached, hospitals would cease to require resident professional officers; and, indeed, their existence is in this book almost ignored. But if one tithe of the practical instructions given (specially as to discipline and routine duties) be learnt and followed, the quality of our hospital nursing, both in London and the provinces, will be materially improved, to the benefit alike of patient and physician.

The Climate and Resources of Madeira. By MICHAEL C. GRABHAM, M.D., F.R.G.S. London: J. and A. Churchill.

To the general reader, the invalid, and the physician we can equally recommend this little book, and more especially at the present time, when, notwithstanding the temporary quarantine, it is hoped that the island may become a timely refuge for many of our fever-stricken soldiers who are exposed to the sickly climate of the West Coast.

Enlisting our interest in the early history of the place, the author adds some pleasing descriptions of its scenery, and leads us in a three-hours' journey from the seaside town "Funchal" up to the "Grand Curral"—a deep, capacious gap amongst the central mountains, which, 4000 feet above the sea, suddenly opens, revealing the meeting point of the ravines in their grandest magnificence, with precipitous walls of about 2000 feet. The efforts to recover the famous vineyards from the destroying fungus, and the attempt to introduce the chinchona plant, are described. A judicious warning is given against deducing climate from mean temperatures, and the equable warmth of Madeira is contrasted with the variations of Mentone, making out a fair case against the latter. The sanitary condition of Funchal is admitted to be bad, insomuch that cholera on its first advent in 1856 carried off 8000 persons; but it is stated that "yellow fever has never visited the island in any form." Such are a few of the many points of interest touched on in the book.

THE ASHANTEE WAR.

WE are in receipt of intelligence from correspondents at the Gold Coast, from which we glean the following particulars:—The Rifles disembarked, on the morning of the 1st January, to a man, followed by the first section of the 42nd Highlanders on the 3rd, and the second on the 4th. The last-named corps had lost a man from erysipelas, and left twelve sick behind. The general advance was fully expected to take place on or about the 15th. The question of transport, as we had, by the way, long ago indicated, is still *the* difficulty, and a very serious one it is. It appears now that the Fantees prefer even fighting to working; and if any break-down occurs, it will be at this, the weakest point in the arrangements. Dr. O'Reilly, late civil commandant, has undertaken to raise a corps of carriers from the West. Meanwhile, the 23rd regiment has had to re-embark, owing to the difficulties of procuring transport equal to their requirements. The general health of the European troops is very good, and it is fairly good among those that have been serving already at Cape Coast Castle or on field work. The climate is allowed on all hands to improve in the interior. The men engaged in the bush have suffered to some extent from dysentery, especially those of the 2nd West India Regiment, some forty or fifty of whom had been sent from the front to be forwarded to Sierra Leone. The hospital accommodation at Cape Coast Castle is ample, and has been largely increased by the erection of huts at Connor's Hill. An officers' hut for eight patients has been erected. The sick of the West India regiments will be accommodated in the garrison hospital, supplemented by huts and marquees to the required extent. The arrangements as far as the Prah are completed, and those beyond it were already designed. Between Cape Coast Castle and the Prah there are seven halting places. The distance is consequently intended to be accomplished in eight marches, the majority of which will equal about ten or twelve miles each. Sutah, the fifth and least satisfactory station on the line of march, according to the last accounts was to have been abandoned, but it is now to be utilised, in consequence of the facilities it affords. It is believed that there will be about four halting stations for the bearers between the Prah and Coomassie, and the transport arrangements will, it is hoped, allow of the easy removal of fifteen men daily from the field column to the base. There are large supplies of ships' cots and hammocks, and, if the bearers are only forthcoming in sufficient numbers, from 400 up to 600 or 700 sick can be removed per month if necessary, which is very improbable. The programme of the arrangements for the floating hospital-ship *Victor Emanuel*, and the other auxiliary hospitals, as well as the invaliding arrangements detailed in the document sent out by the home authorities, have given great satisfaction. The quarantine arrangements at Cape Coast Castle are very stringent, quarantine being imposed on every vessel from the southward. This is essentially necessary, and there is no means of telling whether the fever cases on board them are of the ordinary endemic or of the specific yellow fever type. It is a very significant fact that yellow fever down the coast generally appears first and is most inveterate in the coal hulks, alongside which the steamers lie. There is every reason to hope that by the rigorous application of quarantine to vessels arriving at Cape Coast from the northward as well as the southward the introduction of yellow fever may be avoided; and, happily, that disease is said never yet to have prevailed in an epidemic form at that station. The *Volta*, which took home the mails of the 27th December, was placed into quarantine, having, it was said, yellow fever on board. She carried a considerable cargo from Cape Coast Castle, and much inconvenience was occasioned by the working of the new quarantine laws.

DR. CHARLTON, of Newcastle, recently delivered a highly interesting lecture at the Literary and Philosophical Society's room in that town on "Society in the North of England in the last Century." The lecture dealt chiefly with the stirring events of 1715 and 1745, during which periods the county of Northumberland was divided into two camps, Hanoverians and Jacobites—Whigs and Tories; one resolved to uphold the existing government and the other participating in the abortive risings of the Stuart adherents. The effects of the conflict on the social conditions of the people were well pourtrayed by Dr. Charlton. At the conclusion of the lecture, Sir W. G. Armstrong expressed a hope that steps would be taken to publish the lecture.

THE LANCET.

LONDON: SATURDAY, JANUARY 31, 1874.

MR. GLADSTONE'S *pronunciamiento* has been so unexpected, and the reconstruction of Parliament so hurried, that small time, we fear, has been vouchsafed to electors for a calm and well-weighed choice of representatives. The election, as *The Times* well puts it, is no better than a "scramble for seats"; and the Legislature will find its muster-roll composed of men who in not a few cases are little entitled by experience or knowledge of public affairs to assist in its deliberations. There are questions before the country of the deepest and most urgent importance, the solution of which, one way or other, will affect its condition in the most vital parts—questions of even greater moment than the remission of the income-tax or the lightening of fiscal burdens. Among these the great problem of sanitary administration, with its congener medical reform, yields to none in importance; and it is matter of the deepest disappointment that neither the one nor the other seems to occupy the smallest space in electioneering manifestoes, from the "prolix narrative" of the Premier to the epigrammatic rejoinder of the leader of the Opposition.

When, six months ago, Mr. GLADSTONE addressed the British Medical Association on its functions and interests, he had nothing to say of the questions which were then agitating it to its centre—medical reform and sanitary administration. The indifference he then manifested on these points seems exaggerated into active perverseness towards them on the part of his colleagues. The whole subject of preventive medicine continues to be regarded in the most wrongheaded spirit by Mr. STANSFELD, whose practical suppression of Mr. SIMON and his staff is not more prejudicial to the real sanitary interests of the people than insulting to the medical calling. In this policy Mr. STANSFELD appears to be aided and abetted by Mr. LOWE, a member of the Local Government Board, and by Dr. LYON PLAYFAIR, from whose antecedents as a member of the Senatus of the great medical school of Edinburgh better things might have been expected. Representing, as both these gentlemen do, constituencies embracing a large number of the profession, there is yet nothing in their policy which betrays the slightest anxiety on their part to promote the true interests of medicine and its practitioners. They have, on the contrary, looked passively if not approvingly on at Mr. STANSFELD'S treatment of the medical department—a department the fair and full development of which means the social regeneration of the people, the necessary preliminary to all effective education and moral improvement.

For this state of things the profession is happily not without at least a partial remedy, and the present is an opportune moment for its application. Short as is the time which Mr. GLADSTONE has vouchsafed to the country for the choice of its representatives, it is not too late for the medical elector to make his voice heard and his influence felt before the polling day. He can question the candidate as to his views on the great sanitary questions of the hour. He can extort from him the promise or the refusal of a pledge to insist on the recognition of these questions by the Legislature, and he can give or withhold his vote and determine the votes of others according as the candidate commits himself. Greenwich, Halifax, London University, and the conjoint academic constituency of Edinburgh and St. Andrews have it in their power to call their representatives to account, and to make them vindicate their stewardship in the past or promise amendment in the future. Other constituencies where the medical element is strong should adopt the same line of policy; and we doubt not that even at this the eleventh hour a wholesome impression will be created that the profession is thoroughly alive to the indignities heaped upon it, and determined to take every constitutional means to bring about such changes in the legislative treatment of medical and sanitary affairs as will conduce to its own best interests and those of the public at large.

As the advocate and representative of medical opinion in this country, THE LANCET holds itself aloof from all party politics as such, and regards measures and not men; but we cannot forget that the interests of the profession in the past have been more in accordance with advancing and reforming policy of a Liberal administration than otherwise. It is consequently with regret that we find ourselves opposed in the interest of the profession and on medical and sanitary grounds to a Government from which we had every right to expect sympathy and support. If ever there was a time when a Liberal Government was called upon to give heed to the interests of the medical profession it is the present, when they have had to rely upon the ability and energy of the members of the public medical services to protect the troops they have sent to the Gold Coast from falling victims to the effects of a deadly climate. The Ashantee expedition is happily described by one of its most powerful opponents as a doctors' and engineers' war, and but for the foresight and labours of the former the Prime Minister would not have been enabled to dispose of Mr. DISRAELI in the Straits of Malacca with such a light and easy spirit as he has done.

THE discussion of a subject like that of pyæmia is beset with difficulties of no ordinary kind; and we could not wish to have any better illustration of this than the very different and even discordant views advanced by those who, by their experience and ability, are most likely to form correct opinions, and best entitled to express them. Between the views expressed by many of our highest authorities at the Clinical Society and those embodied in the series of lectures by Mr. ERICHSEN the gap is so wide and the differences so great that it might well seem hopeless to expect the truth can be evolved out of such apparent discord, or that any explanation, unless an arbitrarily devised one, can be found which shall naturally arise out of and embrace all the facts. The subject is one, moreover, of such enormous importance that it deserves the closest study, and the largest, best, and most impartial consideration that anyone can give it.

We need not stay to discuss the use of such a term as

"hospitalism" in connexion with pyæmia. It is no doubt open to the grave objection that it includes results which are not attributable to the institutions against which it creates an unfair prejudice. We cannot guarantee our patients an immunity from this disease by any purity of the surrounding atmosphere, or any other condition; but we have not a shadow of doubt that Mr. ERICHSEN is, in the main, perfectly right in attributing a large proportion of the cases of pyæmia and its allies to conditions associated with defects in hospital hygiene. Mr. ERICHSEN bases his reasoning on such grounds as the following:—The comparative results of hospital and private practice; the results in urban and rural institutions of large and small size; the experience of military surgeons of all ages, seconded by his own special experience as to the repeated production of so-called septic disease under certain conditions of ward-atmosphere; and, lastly, he fortifies his position by the collateral evidence afforded by lying-in hospitals and the results of operations for ovariotomy.

Our object in entering on this discussion being mainly a practical one, we cannot avoid asking ourselves whether much of the confusion introduced into this subject does not arise from the arbitrary way in which the term "pyæmia" is made to embrace several varieties of that disease, allied to one another in many respects, and acknowledging similar but not identical causes. The highly instructive series of cases narrated by Mr. PRESCOTT HEWETT offers, as their author urges, a problem that has yet to be worked out. Some of them appear to have been more allied in character to the pyogenic fever of Sir WILLIAM JENNER, or the acute purulent diathesis of TESSIER, than to pyæmia as generally understood. It is not sufficient to assert, however, that such cases have occurred; it must be explained why some surgeons encounter a large number of instances of pyæmia in private, while others, whose practice is equally extensive, have never met with a *bonâ fide* case, or with extremely few. What is the unknown determining cause of the difference? The surgeon who perceives the development of pyæmia in a private patient placed under the best hygienic conditions, and the observer who has watched an outbreak of the same disease again and again in the foul atmosphere of an overcrowded ward, naturally receive very different impressions. To the first the operation of personal causes appears the dominating influence, just as the evil effects of overcrowding occupy the foremost rank in the mind of the second. And the inference of each would probably be correct; for the secondary suppurative phenomena of pyæmia, unconnected with an open wound, and arising from the absorption of some of the local products of a blood-clot, or those following an abscess of bone or an osteo-myelitic affection, or that form of the disease described by Dr. WILKS as arterial pyæmia, must depend upon personal or accidental causes connected with constitutional conditions, modes of living, and other circumstances over which we can have little or no control. These cases will occasionally arise where all the surrounding hygienic conditions are most favourable. Where there are no open wounds, there can obviously be no direct infection through them; and any injurious results that might be attributed to external conditions could only act indirectly on the system, and influence through it the proximate or remote effects of the local lesion. It is quite probable that constitutional predisposition, certain constitutional changes resulting from the sudden impression on the nervous system made by operation or injury, habits of life, epidemic causes, and atmospheric conditions, may one and all be factors in the production of pyæmia; and it is certain that there must be some anatomical and physiological reasons to account for the well-established fact of the much greater proclivity of injuries implicating bone to generate suppurative fever than those of the soft parts. We are ignorant, however, of the proportion of cases of pyæmia that ought fairly to be attributed to these causes; but be the proportion what it may, it does not seem to invalidate the position taken up by Mr. ERICHSEN and other surgeons, which is this: the aggregation of suppurating wounds in a ward, so as to foul its atmosphere, has been so often followed by an outbreak of pyæmia as to possess all the force of an oft-repeated experiment.

The occurrence of pyæmia in surgical practice appears to be intimately associated with the presence of pus, just as the pathological tendency of that disease seems to be to its production, as metastatic abscesses, in various parts of the body. The reason that it is so frequently associated is, doubtless, to be ascribed to the fact that suppuration is the most frequent condition of those wounds, diseases, and injuries which are the usual antecedents to the disease; but we can scarcely avoid seeking for an exponent of the phenomena in the production of some septic change in the discharges of a wound, and to the introduction within the system of a something that has been generated by that change. We know next to nothing of its nature; nor, assuming that the phenomena of pyæmia depend upon the action of a specific cause, whether it be a poison like that of cattle plague and other diseases of the zymotic type. This much seems clear that, once engendered, the disease tends to spread in the surgical wards of a hospital, and to infect them for some indefinite time afterwards.

If we take the death-rate of any rural and urban population, we find it increases with an increase of population in a given area. We would not, of course, be understood to say that, by parity of reasoning, a large hospital must be more unhealthy than a small one; that will depend upon a great many other circumstances which may well turn the scale on the side of the building in which they preponderate; but, assuredly, the advantage of dispersion to the sick must be admitted as a sound sanitary principle. We shall see, by and by, how this principle admits of practical application as regards certain classes of surgical cases—when we come to consider the provision requisite for the medical and surgical requirements of a hospital; meanwhile, it touches a source of fallacy underlying the comparison instituted between large and small hospitals and private buildings. It must be excessively rare that the hygienic conditions of the buildings between which such a comparison is instituted are similar or identical. Take ventilation. It cannot be too often repeated that whether a patient is in a band-box or a church the air will be fouled unless proper provision be made to guard against it. And it is easy to conceive of a surgical case being placed in the open air under circumstances hygienically even far more unfavourable than if

occupying a hospital ward. Until, therefore, we know all the conditions *quoad* a particular case, whether in a private house or a hospital, knowing what so many private houses are, we cannot be sure that the advantages of isolation were not more than counterbalanced by some existing defects. Dr. MASSY, in his notes on Hospital Construction and Ventilation, alludes to many cases in point gleaned from the experience of military and other surgeons during the American and Franco-Prussian wars; and Dr. FRANK'S experience after Sedan showed that the small hospitals established in private houses were quite as unhealthy as the regular institutions, if not more so. The same thing occurred again during the siege of Paris. And we have the assurance, on the other hand, of Mr MACCORMAC and others that the results at the unexceptionably excellent temporary hospital constructed in the Emperor's garden were in striking contrast with those obtained elsewhere. Just as Mr. ERICHSEN has noticed that the overcrowding of his surgical ward with suppurating wounds was always followed by disastrous results, so was the same thing noticed, again and again, during the Franco-Prussian war. Up to a certain time the patients in a building were doing well, when an accession of wounded took place in consequence of the systematic evacuation of patients from post to post, and cases of pyæmia almost immediately appeared, and the disease spread. Of course this was differently accounted for by different observers. Some attributed the outbreak to the introduction of the disease by some one of the last-comers, and this is very possible; but the fact is quite parallel with those which Mr. ERICHSEN has advanced, and it seems to us accountable on the grounds alleged by him. Nor should it be forgotten that in some of the cases of pyæmia occurring in private houses, where the sanitary conditions appeared unexceptionable, there might not have been that attention to the minutiæ of personal hygiene which we regard as essential, and which are capable of counteracting the evils even of a badly constructed hospital. But we must defer any consideration of the evils arising out of the defective construction and ventilation of hospitals and the overcrowding of surgical wards until next week, when we hope to indicate some of the methods by which these may be overcome, and to point out how much may be accomplished by following in the direction already taken by Mr. CALLENDER in regard to matters of personal (bedside) hygiene.

WE were not surprised to learn, some fortnight ago, that those Medical Officers of Health—about forty in number—who have taken the charge of combined districts throughout the country had thought fit to assemble themselves together in order to give to each other some account of what had been done within their respective boundaries during the past year. And, indeed, it was high time to do so. For the chaotic state into which the President of the Local Government Board has reduced sanitary organisation, and the persistency with which the Medical Department at Whitehall has, in the arrangements connected with the work, been all but ignored, must of course have led those health officers who are doing work in these unmanageably large districts to consider their position, and to combine for the purposes of mutual advice and support. The meeting was not public, and we have no means of judging as to what is likely to be the future attitude of these officers as regards the central authority. For this, as we take it, is the great question to be settled. As things are now, no professional advice, practically speaking, emanates from the Local Government Board; and the conflicting ideas promulgated by Mr. STANSFELD'S lay inspectors have simply made confusion worse confounded. Hence it is necessary for all health officers with large areas to declare whether their districts are now, or are ever likely to be, under any sort of sanitary control; and whether they are or are not content to muddle on, without having aid from an experienced central staff, the members of which might indeed help to rectify the blunders of the past, but have not as yet been requested to do so.

It must be remembered that two sections of urban and rural sanitary officers now exist in England: The forty above mentioned, whose entire time is monopolised, most of whom, as we believe, are men specially well adapted for the work, but the range of whose duties is so extensive that these duties cannot, under any possible circumstances, be performed conscientiously or satisfactorily. The second class is composed for the most part of general practitioners who are evidently paid some paltry ten or twenty pounds a year to do nothing, and so to make the Act a dead letter. A certain proportion of the sanitary authorities who have made these appointments elect to pay their own officers, and so, as they imagine, free themselves to a certain extent from the yoke of the Local Government Board. It is perfectly clear that, come what may, the entire system of districts (if system it can be called) must be geographically rearranged, and that at no distant period. It is equally clear, as we have over and over again predicted, that the business of the Public Health Act cannot be carried on for the sanitary benefit of the country unless all medical officers, port, urban, and rural, engaged therein, are directed in their duties by skilled professional advice from the central office, so that the staff of that office may at all times be used as a "work of reference." These conditions of success seem to us eminently plain and practical, and hence it would appear to be natural that, as one of the first results of combination, each medical officer of health should place before his committee the present unsatisfactory position of things, and the absence at Gwydyr House of any plan whereby professional aid may be asked for and obtained. It appears hopeless to anticipate a radical reform in administration at Whitehall under the present *régime* unless a considerable amount of pressure from without is brought to bear upon the Government. We take it that the officers of combined districts, if they act in concert and with decision, may directly, or through their local chiefs, assist very materially in bringing about this necessary reform at head-quarters. Until areas are rearranged and districts defined more satisfactorily, the records of duties done by health officers, however ably collected and tabulated, cannot be specially valuable as foundations of future sanitary work.

FEW histological subjects have received so much attention of late years as the changes which nerve-fibres undergo after division, and the mode in which reparation takes place

in them. In the bibliography of an article by Dr. HERRMANN EICHORST which has just appeared in VIRCHOW's *Archiv* on "Nerve Degeneration and Nerve Regeneration," we count nearly seventy essays and papers as having been contributed to the more important periodicals since the publication of Sir JAMES PAGET's lectures on Repair and Reproduction in 1849, and several might be added to this long list. Yet after all this labour it would appear that our information is still imperfect and uncertain. FONTANA first observed that nerves when divided healed by a material not very dissimilar to nerve-tissue itself. MICHAELIS believed that this took place even when half an inch or more of the nerve was removed; and though his statements were called in question by ARNEMANN and MÜLLER, they were corroborated by PRÉVOST, SCHÖN, and several others. To this important point in pathological histology a physiological question soon became connected—namely, whether after the division and reunion of a nerve it recovered its functions. The progress of inquiry soon showed that it was necessary to distinguish two sets of phenomena that occur after section—one set indicating degeneration, and the other showing regeneration. So early as 1839 NASSE demonstrated that the phenomena of degeneration were essentially those of fatty metamorphosis; and all subsequent observers have been in accord with him, except in so far as SCHIFF, LANDOIS, and some others have maintained that healing by first intention may occasionally be seen, the nerve preserving then all its characters and attributes. Admitting that, as a rule, fatty degeneration takes place in the peripheric stump of a nerve after section, considerable discussion arose as to what parts of the nerve underwent the degeneration, the conclusion arrived at by most observers being that both the cylinder axis and medullary sheath were implicated. In regard to the mode of regeneration, two accounts have been given. Some have held that the nerve-fibres proceed from fusiform cells, developed either from the nuclei of the nerve-sheath or from those of the medullary sheath, which arrange themselves in rows and then communicate by means of their processes; whilst others regard the new fibres as proceeding from the contents of the primitive nerve fasciculus enclosed within the sheath of SCHWANN—in other words, from the old axis-cylinders. WALLER and BRÜCKE held that the proximal end of the stump alone budded, so to speak; but almost all other observers believe that the new growth takes place from both extremities of the divided nerve.

Dr. EICHORST has undertaken a series of experiments on rabbits and dogs with a view of testing and corroborating or refuting these various opinions. He found the sural branch of the posterior tibial nerve in the rabbit a very convenient one to divide, and in almost all his specimens the nerves were stained with perosmic acid, whilst some were further tinted with carmine or aniline. The chief results of his experiments are that, even within twenty-four hours after section, the nerve near the cut surface presents certain characteristic appearances: it is swollen; the fibres are finely granular, their double outline is lost, and they end in sharp points, owing apparently to their contents being expressed and the nerve-sheath collapsing. The finely granular aspect, which is indicative of commencing fatty degeneration, rapidly extends from the cut surfaces in both directions, peripherally in the distal end and centrically in the proximal stump. If we follow the changes in the centric or proximal stump, we find, according to Dr. EICHORST, that after forty-eight hours the medullary sheath becomes broken up into long cylindrical segments, which soon undergo further division into spheroidal masses, and finally into a finely granular material. The axis-cylinders appear to be much more resistent, and no change can be observed in them for a considerable period. The sheath of SCHWANN becomes thickened at the end of the second day, but again attenuates, so that at about the tenth day it appears to be striated. The perineurine is swollen with serous transudate; and its nuclei, from being scattered and fusiform, become numerous and spheroidal. The process of regeneration begins at the end of the second week, when delicate, slender, homogeneous, band-like structures can be observed running into and from the degenerate and swollen nerve-tissue near the point of section; these are young nerve-fibres, and are, he believes, the result of the breaking up of the undamaged portion of the nerve-fibres into fibrillæ, the fibrils developing from the centre towards the periphery. The development of the medullary sheath takes place in the same direction. In the course of the next few weeks the new fibres become more numerous, broader, and more closely similar to the original fibres. At the end of the second and beginning of the third month they acquire the outer sheath, which, moreover, is at first so loose that a space exists between the nerve-fibre and the membrane, which is finally abolished a few weeks later by the growth of the fibre. The changes in the peripheric portion of the divided nerve are in all respects similar to those of the central stump. The nerves, where they traverse the cicatricial tissue between the cut ends, long remain more slender, paler, and more thickly beset with nuclei, than the rest of the nerve. Dr. EICHORST does not appear to have paid any attention to the time and mode of recovery by the nerve of its functional activity—a subject that well deserves careful working out to settle the various results that have been obtained by different experimenters.

Medical Annotations.

"Ne quid nimis."

THE OUT-PATIENT DEPARTMENT AT WESTMINSTER HOSPITAL.

A SUB-COMMITTEE appointed in July last have now reported on the alleged abuses in the administration of out-patient relief, and the best means of providing a remedy. We can only give the principal points. The immediate cause of the appointment of the sub-committee was a memorial from the assistant-physicians protesting against their having to see thirty new out-patients per day, and pointing out that the cause of the increasing numbers of out-patients at the hospital was in the fact that neighbouring hospitals had taken to institute inquiries. This statement is scarcely borne out in the report of the sub-committee, who say that neither at Charing-cross Hospital nor at St. Thomas's Hospital is there any regular scrutiny or discrimination of patients. At St. George's Hospital there is such a system, and it is favourably reported on by the sub-committee. But this experiment is too young yet to be

relied on, and we believe very grave doubts as to the expediency of continuing the restriction of the number of new cases are entertained by some who know the working of the system at St. George's.

As to the information which the sub-committee has been able to collect on the all-important question of abuse of the out-patient department, there is a caution observable in the statement of it which increases the value of the report in our estimation. The report says:—"Abuses no doubt exist from the attendance of persons able to pay, but in the opinion of the assistant-physicians the extent of this abuse has been over-estimated." At Charing-cross Hospital, the report says, the subject of abuse was referred to the medical committee, who reported that, after fully considering the matter, they were of opinion that the extent of abuse was not so great as had been supposed. The committee, therefore, did not recommend any alteration in the system. At St. Thomas's Hospital, as we have said, there is no scrutiny, but the medical officers are understood to make a selection. The assistant-physicians say that unless some limit is placed on governors' letters, other measures will be useless. Moreover, they state that persons suffering from chronic illness or from poor and intemperate living are not fit cases for out-patient relief. It is certainly a remarkable doctrine that cases of chronic illness are not fit for out-patient relief at a hospital. We should have said that these were *par excellence* the cases for such relief.

The three measures recommended by the sub-committee are—1. The voluntary surrender of the privilege of giving out-patient letters by governors. 2. The exclusion of all who can afford to pay, and who are in the receipt of parish relief. 3. The appointment of a registrar of out-patients to secure the observance of Rule 2, and generally the adoption of the plan pursued at St. George's Hospital.

HEALTH OFFICERS' QUARTERLY RETURNS.

THE medical officer of health for the Hartley Wintney Rural Sanitary District, whose letter we printed last week, appears to be one of those singularly constituted persons who, because they do not happen to suffer from a particular form of inconvenience themselves, are unable to comprehend that its existence may nevertheless be a reality in the experience of others. Mr. Denny, a rural union medical officer, is likewise the medical officer of health for that one rural union; and it does not follow, though he seems unaware of the fact, that because he is in intimate relationship with the guardians of his district, and can find all the materials for his returns close under his hands, therefore every urban health officer or every officer of a large combined urban and rural district must be in the same happy position. If Mr. Denny had taken the trouble to read attentively the correspondence on which our remarks were based, he could hardly have missed so entirely the point of the whole matter as his letter shows that he has done. The question is not how the returns are to be made when the problem is simple, when the local authority is "willing to assist" the health officer, and when all is plain sailing. But when the circumstances are complicated, when the local authority leaves the health officer to get his facts together as best he may, and when there are not only union medical officers to be taken into account, but also the officers of institutions and the registrars of deaths, all of whom want to be remunerated for their help, the necessity arises for clear practical instructions, which ought to have been given, as we hold, direct from head-quarters. The Local Government Board, if it attached any value to these returns, should have made the local authorities responsible for supplying the medical officers with the details required, but this it had not the courage to do. Consequently the medical officers in many cases find that they must either put their hands into their own pockets or let the returns go by default. But being probably as well able as Mr. Denny to appreciate the "usefulness" of such returns if properly made, they represent the state of the case in our columns and elsewhere, not for the purpose of making "a fuss," but in the hope of getting an obvious defect remedied.

DR. RICHARDSON'S LECTURE AT THE CHARTERHOUSE.

DR. RICHARDSON'S lecture to the brethren of the Charterhouse, referred to in a previous number of THE LANCET, was delivered on Thursday, the 22nd, the Master of the Charterhouse, the Rev. Dr. Currey, presiding, and a considerable number of literary and scientific visitors being present. The lecture was a narrative of the scientific life and work of Stephen Gray, a brother of the Charterhouse, from the year 1719 to 1736, and one of the greatest discoverers in electrical science the world has seen.

Before describing in detail the labours of Stephen Gray in electrical research, Dr. Richardson took occasion to point out briefly what had been achieved before Gray commenced his important work. In this effort the lecturer traced the origin of practical electrical science to William Gilbert, the physician to Queen Elizabeth. He then touched on the after labours of Hawksbee, the Hon. Robt. Boyle, Dr. Wall, Otto Guerricke, and Sir Isaac Newton, and he showed, amongst other illustrations, Hawksbee's revolving cylinder. In the course of these investigations, the fact that WAX, glass, and other bodies could be excited electrically was discovered, as well as the phenomena of attraction and repulsion; but it was left for Gray to advance upon these researches, and direct the as yet crude and disjointed facts into system and order. The labours of Mr. Gray in electricity commenced in 1720; after a lapse of many years they were resumed in 1729, and were then continued up to his death in 1736. In this latter period he discovered conduction, insulation, and induction, and Dr. Richardson, using only the same simple instruments the original investigator had at command, repeated all the experiments, indicating step by step the progress of what may be called purely accidental, and yet wonderful, discovery. A simple but beautifully-executed diagram by George Cruikshank illustrated the first great attempt to convey an electrical communication for a distance along a connecting line. This was done on the 14th of July, 1729, by Gray in the grounds of Granville Wheler, Esq., at Otterden, near Faversham, in Kent. The line was a pack-thread, supported on insulators of silken cord supported on poles set a hundred feet apart, the whole distance being between six and seven hundred feet. The electricity was generated by the friction of a glass tube attached to one end of the pack-thread line, and the phenomena of conduction were made manifest by the attraction exerted on leaf brass by an ivory ball attached to the other end of the line. The lecturer also performed the experiment on a smaller but model scale.

A narrative of a meeting of the Royal Society on the 25th of November, 1731, when Gray made his demonstrations in the library of the Society before Prince George and the Duke of Lorraine, excited much interest, as did the account of his reception the day before his death of Dr. Cromwell Mortimer, secretary of the Royal Society, to narrate to him some supposed new discoveries in relation to planetary motion. But, indeed, the work of this man Gray, all through his active career, is so singularly impressive, that there can be but one regret, that not more of his personal history and character were known. His success, Dr. Richardson argued, lay in his keen observation of accidental experimental facts

—facts simple when known, but so important that electricity, as a messenger and otherwise servant of man in these days, might have remained useless had Gray not lived to observe.

THE COMING ELECTIONS AND POOR-LAW MEDICAL OFFICERS.

DR. MAUNSELL, secretary of the Irish Poor-law Medical Officers' Association, has just issued a circular to every member of the service in Ireland, reminding him that an opportunity now presents itself of bringing the grievances of the doctors before the notice of the members of the next Parliament. The main grounds of complaint to which attention should be drawn are succinctly laid down by Dr. Maunsell for the guidance of the Association. In the first place, the registration of qualifications imposed on the profession by the Medical Act of 1858 is denounced as a burden, and, whilst inflicting a fine on qualified medical men, it affords little protection either to them or to the public. The fact of public vaccinators being obliged to vaccinate every person who appears at their stations for that purpose, while receiving one shilling per head only for such as reside in their districts, the others being vaccinated gratuitously, is justly condemned. In the matter of registration of births and deaths the Irish surgeons are also at a disadvantage, while, as regards dangerous lunatics, the unjust duty has been imposed on dispensary medical officers of having to certify as to the condition of alleged lunatics without fee or reward. Another professional grievance is that there is no scale of fees for medical witnesses in courts of law. One of the first objects to be obtained by the Poor-law officers is that the whole of their salaries should be paid by the State, instead of half, as at present, which would have the effect of constituting them into a branch of the Civil Service. Such are the main features of Dr. Maunsell's circular, which we commend to the consideration of the whole profession in Ireland. That the Poor-law medical service in the sister isle has its legitimate grievances no one can deny. The time has come when they must be redressed. Let the members of the service and their friends work zealously in demanding what is no more than their just rights. United they must form a powerful interest in the coming elections; let this interest be given to the Parliamentary candidates who shall pledge themselves to procure a readjustment of the duties and pay of the Poor-law doctors.

HOSPITAL SATURDAY FOR LONDON.

ON Saturday last a conference, numerously attended (according to the reports) by representatives of the trade and working-class organisations of the metropolis, was held for the purpose of considering the propriety of establishing a Hospital Saturday for London. The success of a movement of this kind in Liverpool, Manchester, and Birmingham was dwelt upon, and ultimately a resolution was adopted, recommending that a special day should be set apart upon which the working classes might be invited to contribute to a fund for distribution amongst the various hospitals and dispensaries of the metropolis. A committee was appointed to give effect to this resolution, and it was decided to invite the Lord Mayor to become the president of the committee. Now, considering the long-continued, earnest advocacy by this journal of the Hospital Sunday movement, and that we have invariably urged that in London, as elsewhere, an effort should be made to obtain the co-operation of the working classes in the movement, our motives can hardly be misconstrued when we express the conviction that the manner of calling this conference together, and the measures proposed to be taken by it are much to be regretted. Last year Hospital Sunday was for the first time instituted in London, and with a success which justifies a belief in its permanent establishment. The difficulties inherent in a first attempt of such magnitude altogether precluded any idea of combining with the Sunday collections a canvass of the working classes through the industrial establishments in which they are employed, but we can testify that the importance of such an auxiliary has been fully recognised by the Mansion House Council. Surely no reflection can fairly be cast upon that body because it has prudently determined to perfect the machinery of the Sunday collections before embarking upon the kindred enterprise of a Hospital Saturday. Why, then, should the promoters of last Saturday's conference be so very anxious to anticipate the action of the Mansion House Council by proposing to set up at once a distinct and separate organisation for the industrial collections? We have nothing whatever to say against the gentlemen whose names have been put forward at the head of this new movement, but it would be absurd to compare them, in respect of the confidence they would be likely to inspire in the public mind, with the large, influential, and eminently representative body under whose auspices the Hospital Sunday movement has been set on foot. Two distinct organisations working for one and the same end are objectionable, if only because of the double cost involved; but, beyond that, there is the probability that a rivalry would be created which would not be one of friendly emulation, but of jealous antagonism, leading eventually to the entire discredit of both parties in the estimation of the public.

THE PHYSICIANSHIP OF THE GENERAL HOSPITAL OF NOTTINGHAM.

AN appointment to this office will be made, according to advertisement, in March, 1874. The following is an extract from the rules as to the qualifications required for this office:—

"Every candidate for the office of physician shall have obtained a degree in medicine at one of the following Universities—viz., Oxford, Cambridge, London, Dublin, Edinburgh, Glasgow, or at some other University of the United Kingdom which requires a residence of four years at least within itself,—or at some other medical school, as one of the qualifications for the degree of Doctor of Medicine, and shall be a Fellow or Member of the Royal College of Physicians in London. No physician of the institution shall, during his tenure of office, practise surgery, pharmacy, or midwifery, or be connected in partnership or otherwise with any person in such practice."

It is pretty clear that this rule in its present state, as far as it has any definite meaning, shuts the hospital up to physicians of a time long past, when a university required four years' residence within itself. No university acts so unreasonably now, and even when such requirements were in force some of our best physicians in London were compelled to take their degrees from universities less exacting in the matter of residence. These gentlemen, though giving lustre to London hospitals, would be excluded by the Nottingham rules. The above advertisement, taken from a local paper, does not correspond with the form of the rule as we find it in the printed copy of the rules. We presume that the original rule was found to be so unmeaning and so inapplicable to anything which ever did obtain, that it has been the subject of amendment, but without a very happy effect, for it is no longer the universities which require a period of four years to be devoted to medical studies, but all the licensing bodies, in accordance with the requirements of the General Medical Council. The period of residence at a university is in every case now greatly restricted, and men are properly allowed much more freedom of choice as to the place and

school where they will take their education. The rule, even as amended, is suggestive of an antiquated state of things, and may exclude very eligible men. In its original form it was so badly drawn and so unwise in its spirit as to be incapable of amendment, and the best advice we can give to the authorities of the hospital is to make a new one which shall generously recognise all the degrees of the United Kingdom, and leave graduates thereafter to be elected on their merits.

LEICESTER SQUARE.

IN common with all Londoners, we appreciate fully the munificent liberality of Mr. Albert Grant in rescuing Leicester-square from its present disgraceful condition, and making it at once an ornament and a healthy pleasure-ground for the neighbourhood. At the risk, however, of appearing to look a gift horse in the mouth, we must enter our protest against the selection of worthies whose features are to be commemorated by busts placed in the ornamental garden of the future. Hogarth, Sir Joshua Reynolds, and Sir Isaac Newton all lived in Leicester-square, and may fairly claim to be represented; but we are surprised that Mr. Grant should have been obliged, as it appears, to include Dr. Johnson simply as "the friend and constant visitor of Sir Joshua Reynolds," when John Hunter—a man no less eminent, though perhaps less popularly known—may claim not merely as a resident for a long time in the square, but as having founded there the magnificent museum now in the College of Surgeons of England, with which his name will always be connected. Hunter moved from Jermyn-street to Leicester-square in 1783, where he purchased the lease of some premises on the east side of the square, consisting of a dwelling-house with a large piece of ground extending back to Castle-street, where there was a second smaller dwelling. Between the two houses he built his museum at a cost of not less than £3000, and it was completed and occupied in 1785. John Hunter died on October 16th, 1793, at St. George's Hospital, and his body was conveyed in a sedan-chair to his house in Leicester-square, and subsequently buried in the vaults of St. Martin's-in-the-Fields, whence it was removed a few years back to Westminster Abbey. Sir Charles Bell, too, a name held in the highest honour in the profession as well as out of it, and to whom the greatest physiological discovery of two centuries is due, has been overlooked. Bell lived during the early part of his career in Leicester-street, where he accomplished some of his most important scientific work. Eminent in art, and pre-eminent in science, he has the strongest claims for a place in the memories of the people.

If it is not too late, we would earnestly press upon Mr. Albert Grant that the busts of Hunter and Bell should be added to the collection. The excellent statue of Hunter in the College of Surgeons would readily afford the means of obtaining a satisfactory likeness. We are sure that such a recognition of departed greatness would be gratifying, not merely to the medical profession, but to the whole scientific world.

ARSENIC IN THE HOUSEHOLD.

THE colour of green appears to possess a terrible fascination for the inhabitants of Greenock. It is a fetish constantly propitiated, and whose empire may be seen on every wall and counter in the town. Did the pigment consist of innocuous material, no objection could be urged against its display by bakers, grocers, and confectioners. When, however, it is considered that the colouring-matter depends on such a powerful poison as arsenic, it appears positively criminal for a tradesman to indulge his predilection for the colour so far as to embellish with it his wares. A recent report by the public analyst for Greenock draws attention to the alarming extent to which arsenical green is used in the town, and contains some curious revelations on the subject. Last Christmas morning a large square cake, in which was imbedded a green card, labeled "For the bairnies," was seized in a baker's window. The card was coated with sugar, and on being submitted to analysis was found to contain 7·04 grains of arsenious acid!

A cake bearing such a ticket would disagree with any "bairnies" except those of Styria, where arsenic-eating is a practice, and taught early; and the probability of a child sucking the sugar-coated card after eating of the cake would be reasonably great. Most of the houses in the town would appear to be papered or painted green, the colouring-matter being so loosely laid on that very slight attrition is sufficient to remove a powder consisting mainly of arsenic. The poisonous material is also largely used for colouring the flowers, feathers, and ribbons of ladies' bonnets, the pigment from which can often be shaken off. Bright green tapers and candles are also much in vogue in the town. We expect to hear shortly that the population is clad in habiliments of the favourite hue. Without exaggeration, Greenock may be said to be suffering from "green sickness" which nothing but an interdict on arsenic will cure.

MEDICAL WITNESSES' FEES.

AN occurrence at a recent Petty Sessions at Ilford illustrates the ignorance of both magistrates and medical men respecting the fees due to medical witnesses. In a case of attempted suicide the surgeon who had treated the prisoner, when called upon to give evidence, asked the bench for his fee before he was sworn. The chairman said the bench had no fund wherefrom to give it to him, but he could not be compelled to give evidence without it. The only thing the bench could do was to grant him a certificate to give to the Commissioners of Police, and he could stand his chance, if he liked, of getting his expenses from them. Naturally enough, the surgeon declined this offer, and his evidence was not taken.

We believe the magistrate was altogether wrong in his statement. Under a regulation of the Home Secretary every medical witness before a magistrate is entitled to a sum not exceeding 10s. 6d., if residing in the city, borough, or parish where the examination takes place, or within two miles of it; or if beyond that distance, to a fee not exceeding £1 1s. This fee would have been paid as a matter of course by the police authorities on the magistrates' certificate, or if there were any difficulty, an appeal might be made successfully to the Home Secretary. The surgeon was wise, no doubt, to make his appeal before being sworn, and in a civil action might decline to give evidence without previous remuneration; but we doubt the legality of his refusal in a criminal case.

A DANGER OF MANACLES.

A CASE of death arising from mortification of the arms consequent, as alleged, upon the employment of ordinary police handcuffs, has recently been investigated at Rainhill, near Manchester. A man, aged thirty-nine, was committed for a week to Kirkdale Gaol for drunkenness, and was handcuffed in order to be conveyed thither. It appeared that the police-constable nipped the skin of his wrists in putting on the handcuffs, and it was elicited that "it is rather a common thing to nip a piece of skin or flesh out of a man's wrist when putting the handcuff on; it is difficult to avoid it in many cases." Be that as it may, the prisoner in this case was "nipped," although the attention of the prison surgeon does not appear to have been called to the injury. The prisoner was entered in the prison hospital-book as

"feeble and half-paralysed," and was doubtless in a condition in which a slight local injury would soon become aggravated. Accordingly, the day after his discharge he was found to have mortification of both arms, of which he died.

The coroner's jury proposed to bring in a verdict to the effect that death was the result of the handcuffs having been placed too tightly on the deceased's wrists, and also to neglect while in gaol; but this the coroner, who is not a medical man, refused to receive. It appeared that the man had only been seen on one occasion by the gaol surgeon, and the coroner declared it to be next to impossible that the deceased could have asked for a doctor without having one. This we can readily believe, and we have no intention of imputing blame to the surgeon; but that a "feeble and half-paralysed" man should have been discharged from a prison with his arms in a state of incipient gangrene implies neglect somewhere. In the end the jury found the following impotent verdict—"That death is caused from mortification; but how the mortification has originated there is not sufficient evidence to show," which we commend to the notice of the Home Secretary, together with the pattern of handcuffs employed.

HYDROPHOBIA.

No one conversant with newspaper literature but must have been struck with the great number of deaths from hydrophobia recorded during the last three years in this country. From Sheffield we have an account of a man dying last week of the disease, in horrible agonies, while at about the same period a presumably rabid dog ran amuck among the inhabitants of Huddersfield, biting no less than six persons. Five of these were immediately taken to the Infirmary, where their wounds were cauterised with nitric acid and nitrate of silver. The animal—a large sheep-dog—was killed, and an examination of its body brought to light a circumstance which leads us to think it possible that the dog's violence was due solely to irritation, and not to rabies. In the stomach (which was empty) a common pin was found near the pyloric end, with its head buried in the coats of the stomach, the point having penetrated through into the cavity, where about half an inch of it was free. As regards the prophylactic measures to be resorted to in cases similar to that we have just recorded, we are sorry to have to confess that the armament of medical science offers no weapon capable of counteracting the dire effects of true rabies. Complete excision of the injured part immediately after laceration has been advocated by Mr. Youatt and others whose experience gives weight to their opinions, while the pathological condition of the brain and medulla after death would suggest depletion after suspicious bites.

CARDINAL CULLEN AND HOSPITAL SUNDAY.

THE refusal of Cardinal Cullen to join in the Hospital Sunday scheme for Dublin was bad enough; but the explanation of it is still worse. Part of the explanation, perhaps the most creditable part of it, is that the centralisation of charitable donations for hospitals in one fund is not the best way of attracting donations to each of these institutions, or of popularising their claims. In the *Freeman* we have the other part of the explanation—viz., dissatisfaction with the fact that at a recent election of two medical officers to the Richmond Hospital a Catholic was not elected, though there certainly were five Catholics on the board of eleven members. One good that most of us expect from Hospital Sunday is a better understanding of each other by different churches. To the credit of Catholics in London no such feelings as those which seem to influence Cardinal Cullen have deterred them from most cordially and ably supporting a joint collection by all churches and creeds for institutions which should know of no distinction of creeds. If the Richmond Hospital is narrow and unjust to Catholics, a Cardinal of the Church should have overcome evil with good, and taken vengeance by moving his church to a great effort in favour of the sick of all creeds. As to the more reasonable part of the Cardinal's objection—viz., to centralisation, there is much to be said against it, and much more for it. It secures a large sum at a very small cost, and gives information and control on a large scale. Moreover, it tends to abolish sectarianism in charity, and to relieve a sick man in virtue of his sickness and of his humanity, without reference to his creed, while it supplies a field for the co-operation of men of all creeds.

DR. LIVINGSTONE.

SOMETHING of personal loss has been felt by all true-hearted Englishmen throughout the world at the news of Livingstone's death. The great missionary explorer died on the 15th of August last from dysentery of a fortnight's duration. He had, it seems, attempted to cross Lake Bemba from the north, and, failing to do so, had doubled back and rounded the lake, crossing the Chambize and its effluents. Then he crossed the Luapula, and having traversed a marshy country, with the water for three hours at a time above his waist, reached Lobisa only to die. And so passed away one of the most intrepid crusaders in the cause of science and civilisation the world has ever known. Particulars of his death have yet to come; but we shall scarcely need to be told that the fatal hour found him ready as one who had ever lived and worked under his great Task-master's eye. His body will reach Zanzibar in February, and will be conveyed to England, where, we doubt not, it will find a resting-place in the great mausoleum of England's worthies, Westminster Abbey.

"Never to mansions where the mighty rest
Since their foundation came a nobler guest."

Non omnis morietur! For over and above his written works and his collected materials, which will form a κτῆμα ἐς ἀεί for the land of his birth, will remain the bequest of his example, rich in every element that ennobles humanity, from the wisdom of the sage to the intrepidity of the soldier, from the pride of the philosopher to the humility of the Christian.

AN AMERICAN PHILANTHROPIST.

A NOTABLE instance of that large-hearted benevolence and noble philanthropy which so often distinguish wealthy Americans was lately brought to light by the death of Mr. John Hopkins, of Baltimore. Mr. Hopkins, in his will, bequeathed, amongst other gifts, monetary provision for the following objects:—1. A university at Clifton, with a law, medical, classical, and agricultural schools, endowed with probably 3,000,000 dollars. 2. A free hospital for four hundred patients, complete in all its appointments and departments, for the reception and treatment of the indigent sick of Baltimore and its vicinity, and, in special cases of casualty, for people of the State generally, without respect to age, sex, or colour. The hospital will form a part of the medical school of the university at Clifton. 3. A convalescent hospital in a country neighbourhood, within easy reach of the city, to which patients from the free hospital may be removed as soon as relieved of their maladies, and where they may completely recruit their strength and vigour before returning to their customary labours. 4. An enclosure of the thirteen acres of the hospital as in part a free park to all who choose to enter it, and ornamented with trees and shrubs and parterres of flowers, with seats for rest and sprinkling fountains. 5. In connexion with the hospital a training-school for nurses

will be established, in accordance with the plans of Florence Nightingale. Such nurses are to be paid out of the trust funds. 6. A home for coloured orphans and for coloured children having but one parent, and, in exceptional cases, for such coloured children, not orphans, as may be in need of charity. The home is designed to accommodate about four hundred inmates, and to be enlarged when necessary.

Such a splendid disposition of riches sheds lustre on a community and claims the admiration and pride of the two branches of the great Anglo-Saxon race. John Hopkins's memory will live green with that of Peabody and other large benefactors of humanity.

HISTOLOGY OF THE LEAF OF THE TEA-PLANT.

THE parenchyma of the leaf of the *Thea viridis* abounds in sphæraphides; the margins of the cells of the epidermis are alike sinuous on both sides of the leaf, only apt to appear confused on the upper surface from the adhesion of some of the rounded or oval cells of the subjacent parenchyma; on the under surface there are simple unicellular hairs and oval stomata. All these points may be very easily displayed by soaking the fresh leaf in a solution of caustic potash, and often still better by boiling the part in that alkaline fluid. And, as observed by Mr. Gulliver in his paper on the Short Prismatic Crystals (published, with a plate, in the December number of the *Monthly Microscopical Journal*), in several parts of leguminous plants, and in the testa of other orders, the potash is very valuable in separating vegetable fibres, membranes, and cells; and also in clearing parts so as to expose many plant-crystals otherwise but dimly seen, as was shown experimentally by him in the leaves of tea at a recent meeting of the East Kent Natural History Society at Canterbury.

MEDICAL OFFICER OF HEALTH FOR TAUNTON.

TAUNTON has just elected a medical officer of health, Dr. W. W. Dickenson, of Uffculme, so far as we can gather from the reports of the proceedings of the sanitary authority, at "a fee of two guineas per case," whatever that may mean. Other candidates were the Poor-law medical officers of the union; but the clerk stated that he had gathered from Mr. Wodehouse, the Local Government Board inspector for the district, that the Board "would not sanction any district medical officer of the union to act as medical officer of health." In the course of the proceedings the inspector of nuisances inquired whether he was to obtain the consent of the guardians before "calling in" the medical officer of health, or whether he might do so on his own responsibility. The opinion appeared to be that he should obtain first the assent of the guardians, except in cases of great moment. This appears to be the explanation of the £2 2s. fee. Dr. Dickenson is really appointed, not medical officer of health, but consulting inspector of nuisances!

RE-APPEARANCE OF TYPHOID FEVER AT CAMBRIDGE.

WE regret to state that typhoid fever is still prevalent at Cambridge, no less than eight cases being under treatment at the present time in Addenbrooke's Hospital. We understand that the urban sanitary authorities, in spite of the warnings they have recently received, are literally doing nothing to prevent the spread of the disease. Should the town be again subject to an outbreak of fever as severe as that which occurred before Christmas, the townspeople may well fear that the material prosperity of Cambridge will be seriously affected. The Improvement Commissioners have denied the truth of the statements contained in our report, but the facts are pressing hard on those gentlemen, and they must either yield to the public interests or be superseded in their office.

THE CLINICAL SOCIETY.

MR. PRESCOTT HEWETT, the President of this Society, delivered on Friday, the 23rd of January, a brilliant and very interesting annual address, which was much appreciated by a large body of distinguished members of the profession. The address, and the discussion that followed, will be found in another column, and the list of speakers enumerated sufficiently indicates the interest displayed in the subject that Mr. Hewett chose for the text of his address. The debate was adjourned at 10 o'clock, the proper hour of rising, and we take leave to remark that it would be well if all meetings of this Society closed at the hour prescribed. Several prolongations have lately occurred, to the manifest inconvenience of the majority of members present.

THE "VICTOR EMANUEL."

WE have received some intelligence from Cape Coast Castle regarding the above-named hospital ship, which arrived off the coast on the 1st inst., after a prosperous voyage of thirty-two days' duration. The vessel forms a very prominent object, and was exciting much attention. The *Victor Emanuel* is described as being in perfect working order, and she had already received a few sick from the shore. Captain Gordon, 93rd Highlanders, Surgeon-major Gore, Surgeon Lay, and another medical officer, were among the patients on board and doing well.

A HOSPITAL FOR GRANTHAM.

AT a public meeting held at Grantham on the 12th inst., the Earl Brownlow in the chair, it was decided to establish a hospital in the town. A committee, consisting of highly influential gentlemen living in the neighbourhood, has been formed, and the contributions towards the furtherance of the project have already assumed proportions which fully justify the confidence of the promoters, and leave no room to doubt that Grantham will very shortly possess a hospital capable of supplying all the medical and charitable requirements of the district.

THERE were, during the past four weeks, fifty-two cases of fever admitted into the Stockwell Fever Hospital. Last October it was stated that a large proportion of the number of fever cases came from St. Giles's and Bloomsbury, in which districts an epidemic of typhus existed. The large rate of admissions from these localities still continue, there being out of twenty cases of typhus admitted last month, fifteen from Bloomsbury and the Strand Unions. The attention of the hospital managers has been called to the length of time which the disease has existed in one locality. The Stockwell Small-pox Hospital is now empty.

IN the *London Gazette* of Tuesday we read that His Royal Highness the Duke of Edinburgh has been pleased to make the following appointment in his household:—Dr. Wilson Fox to be Physician in Ordinary to their Royal Highnesses the Duke and Duchess of Edinburgh. We congratulate Dr. Wilson Fox on the distinction accorded to him, and feel sure that the selection made will meet the warm approval of the profession generally.

SIR DOMINIC CORRIGAN retires from the representation of the city of Dublin, and Dr. B. W. Richardson disclaims all intention of opposing the re-election of Dr. Lyon Playfair for Edinburgh and St. Andrews Universities.

THE Council of the Royal Medical and Chirurgical Society, on receiving a communication from Dr. Symes Thompson, on the subject of the recent railway case in which his name appeared, passed the following resolution:—"That, in the opinion of the Council, the probity of Dr. Symes Thompson's character, and the high esteem in which he is held by the profession, fully justify them in coming to the conclusion, and in expressing their firm conviction, that in the haste of the journey he acted entirely from inadvertence, and that there is no ground for imputing to him an intention to defraud the railway company."

THE resident medical officer at the London Fever Hospital writes to *The Times* to correct a statement by which it appeared that small-pox cases are admitted to the hospital. The committee of the institution, acting on the advice of physicians, refuse admission to small-pox patients, and should such patients be sent there by mistake—a circumstance, we believe, by no means rare—they are transferred to the Small-pox Hospital.

THE food analyst of Chelsea complains of the difficulty he experiences in obtaining sufficient ground of *suspicion* of adulteration to warrant him in sending the inspector for samples for analysis. When the Adulteration Act came into operation we pointed out this difficulty of defining an article *suspected to be adulterated*. When the time comes to amend the Act, we hope that the objection we have indicated will receive due attention.

HOSPITAL SUNDAY continues to prosper in Liverpool. The collection was made on Sunday, the 11th inst. The returns up to the 27th amounted to £10,801 19*s.* 2½*d.*, of which £8750 13*s.* 8*d.* was contributed on Hospital Sunday, and £2051 5*s.* 6½*d.* on Hospital Saturday. This is nearly £1000 in excess of the sum raised in any previous collection in Liverpool.

THE Homerton Fever Hospital has, since October, 1871, treated 1344 cases suffering from the various forms of fever. Fifty-six cases were admitted during the past month; of these, twenty-seven were enteric fever and sixteen typhus. Twenty cases of small-pox were lately received in the portion of the building devoted to that disease, the greater number coming from Bethnal-green.

THE annual general meeting of the Hunterian Society will be held at the London Institution, Finsbury-circus, on Thursday, Feb. 12th, at 7 P.M. The oration will be delivered at 8 P.M. by Mr. John Couper. The dinner of the Society will take place at the Albion Tavern on Friday, Feb. 20th, Mr. Thomas Bryant in the chair.

OUT of eight candidates who presented themselves lately for the examination in anatomy, physiology, and materia medica, at the Royal College of Surgeons, Ireland, only one passed! We learn, however, that several of these candidates had been rejected previously, which may account for the untoward result.

THE lessee of the Princess's Theatre (Mr. Guiper) had a morning performance at the above theatre on Monday last, in aid of the funds of the "Nazareth Charity," at which Mr. and Mrs. Rousby and the whole theatrical staff very generously gave their aid gratuitously in furtherance of the object.

CHOLERA still prevails at Munich and Rotterdam, and all ship arrivals direct from the latter place ought to be strictly watched by customs and port sanitary authorities.

SIR HENRY THOMPSON declines to come forward as a candidate for the representation of the University of London in Parliament.

THE Richmond vestry have been fined £150 for neglecting to divert the flow of sewage from the Thames. They will probably appeal against the decision.

THE annual festival of University College Hospital will take place at Willis's Rooms on Tuesday, Feb. 10th, under the presidency of the Earl of Derby.

DR. ROBERT BARNES has been elected one of the twelve honorary members of the Obstetrical Society of Philadelphia.

BRITISH MEDICAL BENEVOLENT FUND.

THE annual general meeting was held on Tuesday, Jan. 13th, Dr. George Burrows, F.R.S., President, in the chair. The report showed that the total amount received by the hon. financial secretary during the year 1873, including subscriptions and donations and a legacy of £10 from the late Dr. Dendy, was £1505 6*s.* 5*d.* The number of distressed medical men or their widows to whom grants of immediate relief were made was 115, the average amount of grant being between £8 and £9. But as in many instances the recipients had families dependent upon them, the actual number of persons relieved was considerably in excess of this.

The number of annuitants is thirty-four, of whom nearly all receive £20 per annum. An earnest appeal is now being made to the profession for help to increase the annuities to 10*s.* per week.

Special votes of thanks were accorded to Mr. N. Henry Stevens for his services as hon. secretary for cases during the past year; to Messrs. J. R. Hill and E. Parkes Young, as auditors; to Mr. Webber, hon. financial secretary; also to Messrs. Churchill, for the use of a room for the meetings; to the editors of the medical journals, for their continued advocacy of the claims of the fund; to Dr. Hare, as treasurer; and to Dr. Burrows for presiding.

The following is a list of the committee and officers for 1874:—

President: Dr. Burrows, F.R.S.

Vice-Presidents: Dr. J. Warburton Begbie, Sir W. Fergusson, Bart., Sir W. Gull, Bart., Dr. Charles J. Hare, Sir W. Jenner, Bart., and Sir James Paget, Bart.

Trustees: Dr. H. W. Acland, Dr. George Burrows, Dr. G. C. Jonson (Chairman of Committee), Sir James Paget, Bart., and Dr. Edward H. Sieveking.

Other Members of Committee: Mr. Edward Ambler, Dr. Edmund L. Birkett, Dr. W. H. Broadbent, Mr. H. Bullock, Mr. John Churchill, Mr. Nath. H. Clifton, Mr. George T. Dale, Mr. Stamford Felce, Mr. J. F. France, Mr. D. De Berdt Hovell, Dr. Thomas Jervis, Mr. John Liddle, Mr. W. Martin, Mr. John Morgan, Mr. J. T. Mould, Dr. Harvey Th. Owen, Dr. John C. Steele, Mr. N. Henry Stevens, Mr. Richard Stocker, and Mr. E. Parker Young.

Treasurer: Dr. Charles J. Hare.

Honorary Secretaries: Mr. Charles S. Webber and Dr. Geoffrey Hett.

THE LATE TORPEDO EXPLOSION AT WOOLWICH.

WE have been favoured, by a correspondent, with the following account of the casualties from the explosion:—

Edward Baker, aged about twenty-three years, a labourer in the Laboratory Department, was killed at the time of the explosion, and on examination of the body on arrival at the accident ward, it was ascertained that the left lower extremity, together with the corresponding half of the pelvis, was completely severed from the trunk. He had been standing in rear of the torpedo manipulating the screw propeller (corresponding to the tail) at the time of the explosion, and it is highly probable that the limb was

cut away by the right lateral fin. The limb was completely shattered, there being no less than four fractures in it—namely, metatarsal bone of great-toe, tibia and fibula, and two of femur, one compound, the shaft of the bone protruding two or three inches.

William Fishenden, aged thirty-four, Laboratory labourer, had several fractures of the bones of the right upper extremity, together with several lacerated wounds, and much bruising and contusion of the soft parts. He was likewise much bruised about the chest, and when admitted into the accident ward was in a state of partial collapse. On the morning following the receipt of injury, reaction having been perfectly established, the right arm was amputated at the junction of its upper and middle third, and he has been since doing well.

Clement McCoan, aged thirty-nine, labourer, Laboratory Department, sustained a compound fracture of the left radius at the lower part of its upper third. He states that at the time of the accident he pulled a fragment of iron about three inches long out of his arm (seat of fracture). He also sustained a compound fracture of the left tibia (middle third). He was conscious of having been struck three times, left forearm, left leg, and forehead (slight abrasion). He is doing well.

James Dymott, aged twenty-two years, labourer, Laboratory Department, had his left little finger shattered, and it was immediately amputated. He is doing well.

James Vaughan, aged twenty-one, labourer, Laboratory Department, received a slight contusion of the muscles of the back, and was discharged on the 26th inst., feeling no inconvenience from his injury beyond a little stiffness in walking.

The explosion was due to the giving way of the diaphragm at the end of the air chamber of the torpedo. It is highly probable that a flaw existed in the steel of which the diaphragm is composed, and that having previously undergone two trials it became less able to withstand the pressure (1000 lb. to the square inch) and gave way.

Correspondence.

"Audi alteram partem."

THE DISCUSSION ON PYÆMIA IN HOSPITALS AND IN PRIVATE PRACTICE.

To the Editor of THE LANCET.

SIR,—At the discussion of Mr. Prescott Hewett's address on Pyæmia, at the last meeting of the Clinical Society, I ventured to refer to the comparative immunity from pyæmia experienced on board the *Dreadnought* hospital ship whilst under the control of Mr. Tudor. My testimony was to some extent called in question by my friend and colleague, Mr. Croft. To prove that I spoke from sufficient authority allow me to refer those who take an interest in the subject to a memoir by Mr. Tudor, published in THE LANCET in 1859. It is there shown that, in the year 1857–8, and the year 1858–9, under the excellent *régime* enforced by Mr. Tudor, the hospital was almost entirely free from pyæmia.

The *régime* referred to was mainly directed against the risk of infection or of convection of poison from one patient to another. That this danger is infinitely greater in hospitals than in private practice it seems to me impossible to dispute, without disregarding, or strangely misinterpreting, daily experience. To lessen or to obviate this convection of poison is the problem to be solved both in hospital and in private practice. As Mr. Hutchinson happily put it, if you would prevent the propagation of thistles in a field, you must cut down the plants before they can scatter their seed.

Obstetric practice, in and out of hospitals, affords abundant illustrations of the laws of propagation of pyæmia. Undoubtedly pyæmia is not the exclusive product of hospitals. It occurs in home practice as well. The difference is that in home practice the cases, being isolated, are not so likely to serve as foci whence the disease may be propagated; whilst in hospitals, if pyæmia occur in one patient, the danger is great that it will spread to other patients.

Given, the focus and the fuel—that is, the first case of pyæmia and proximate subjects in a susceptible state—nothing is wanted but to lay a train of communication between them, and the conflagration spreads. This train is formed in the articles of dress, the hospital appliances, the nurses, the students, and the surgeon himself.

The comparative history of hospital and home practice, obstetric and surgical, has surely settled this point. Obstetric practitioners act upon it, and if they meet with one bad case, and, *a fortiori*, if they have two fatal cases attended on the same day, they retire from work until they have undergone a term of lustration. Is this rule acted upon as rigorously by surgeons?

I am, Sir, your obedient servant,

Grosvenor-street, January, 1874. ROBERT BARNES.

FEVER AT KINGHORN.

To the Editor of THE LANCET.

SIR,—At your request I have much pleasure in giving you an account of the epidemic of fever with which this place has been afflicted during the last two and a half months. In the first place I may state that the town, of about 2000 inhabitants, is situated on the slope of a steep hill on the side of the Forth. The lowest street is along the beach, and the highest stands some 150 feet above the sea level. From its elevated position and the natural facilities afforded for drainage, &c., it ought to be one of the healthiest towns in the country, and so it has hitherto been. Epidemics spreading from town to town in their march invariably pass us in the first instance, and before the disease appears among us we are in a manner surrounded. Such has been my experience during epidemics of scarlatina and small-pox in 1869 and 1872.

Some ten years ago the town had new sewers put in through all the streets with the exception of those on the top of the hill, and the drainage of these roads—for house drainage there is none—has to find its way by the gutters at the sides of the roads into the nearest water-channels, which, unfortunately, are the main supply of water for the domestic use of the inhabitants.

The town is very much overcrowded. For many years, owing to certain obstacles, nothing in the shape of building has been carried on, and as the population has largely increased during that time from the establishment of a large ship-building yard, overcrowding to an extent rarely seen in a country district has been the result. The most of the houses are old, with small apartments, and undrained. When with that we consider the class of the population, it is not to be wondered at that typhus occasionally makes its appearance. Such was the case some three months ago. With it, as in a recent visitation of small-pox, we had no difficulty in dealing. Isolation was strictly carried out, and sanitary measures superintended by myself personally, with the result of stamping it out. This I never could have done had I not been supported by the mill-owners and the proprietor of the ship-building yard, who discharged at my notice all persons coming from infected houses who refused at once to find other accommodation.

Shortly after fever made its appearance cases presented themselves with the unmistakable signs of enteric fever. My attention was at once directed to the water-supplies and the sewage system. I found that nearly all the cases were to be found on the distribution of one particular water, and that from a loch situated to the north of the town. From this loch runs a stream which flows through the town into the sea. A distributing-tank is situated in the middle of the main street, and all lying below that level is supplied from that source. The pipe which conducts the water to the tank has its origin in the stream at the town-head, but previously to that the stream has received the washing of the roads above, and any night-soil and other filth that may have found their way into the gutters flowing into it. When we consider that there are only eleven waterclosets and two public privies in the place, it will create no surprise that the sides of the roads should be greatly used for that purpose, especially by the rising generation. At least a dozen times during the last five years has this water affected the people, though not in the same way.

When the water was bad, diarrhœa immediately super-

vened. I then made a representation to the chief magistrate, and sometimes took the law into my own hands, had the loch water turned off, and a smaller supply of purer water from another source let in, and always with the effect of staying the disease. This I had done at the commencement of the present epidemic, and I reported to the local authority some ten days after that the number of cases had fallen to five. From that time the number of cases gradually increased until they reached twenty-seven.

All the closes were washed with hot lime, the sewers treated with chloride of lime periodically, the middens all removed, and a sheet of instructions delivered to every householder in the borough.

I called on one of the borough officials (the treasurer) and was assured that the offending water-supply was still shut off. I thought probably that those people had received the poison prior to the change, and had it not been for the schoolmaster calling on me with complaints as to the water he was getting, I should not have discovered that the old water had again been turned on, my own house being supplied from a different source. I again remonstrated, and had the water changed; but as I plainly saw that my opinion as to the cause of the disease was looked on as a wild theory, I at once wrote to the Board of Supervision in Edinburgh to send across their medical officer to inquire and report upon the epidemic and its cause. This they did, and on the 2nd of January Dr. Littlejohn, the medical officer of health of the city of Edinburgh, visited Kinghorn, and with me first saw several cases, and then examined into the water-supplies and sewage system. In a long report which he made to the Board of Supervision, he concurs in my views as to the cause, and the Board has accordingly ordered the local authority to carry out the instructions contained therein. For upwards of three years the necessity of Kinghorn having a new water-supply has been the talk of the authorities, and now it will get it. It will now be properly drained, and, with good wholesome water, will again be looked on as a favourite bathing-place as in times gone by.

From first to last there have been upwards of ninety cases under treatment, and of all shades of severity. I did not see the most of the cases till the seventh or eighth day, and some as late as the thirteenth. The deaths numbered five, and three from typhus. In all cases where the pulse and thermometer were not high, a decided crisis occurred on the twenty-first day; in bad cases the fever continued for an indefinite period, evidently owing to the serious bowel lesion, bed-sores, &c. In three-fourths of the cases there was diarrhœa, and in about a fourth of these evacuation of blood; in the other fourth there was decided constipation. Believing with Dr. Maclagan, of Dundee, that diarrhœa is the more favourable state of matters, I never hesitated to give purgatives when required, using either castor oil or mercury with chalk, followed by rhubarb, and in no instance have I seen any bad results follow. I have had one death from perforation and two from excessive hæmorrhage, both of which occurred on the twenty-first day. Milk-and-water in bad cases were my form of support, with wine when necessary, and in other cases a little farinaceous food with milk. When the diarrhœa was very excessive and exhausting, I warmed the milk slightly, and added lime-water, with good results.

At the present date there are but six cases remaining, the fall in the number since the changing of the water, three weeks ago, being steady, and only one new case presenting itself during the past week.

It is to be hoped that now we shall have done with enteric fever, and, with such natural facilities at our disposal for sanitation, we should never see it again, at least in an epidemic form.

I am, Sir, yours faithfully,

JAS. WELSH, M.D.,

Kinghorn, Fife, N.B., Jan. 17th, 1874. Medical Officer of Health.

P.S.—Since writing the above, I have seen your last issue, in which you notice the epidemic and the death of the Rev. James Jenkins. Mr. Jenkins, I learn from his friends, died on the nineteenth day of the fever from the excessive hæmorrhage. With the exception of Mr. Jenkins and two others, all the cases were confined to the working classes. I attribute this more to the difference in their respective habits than to anything else. As to age, the large majority of those attacked were between eighteen and twenty-five. I have just learnt that some seventeen years ago a similar epidemic prevailed, which proved very fatal.

Presuming that I am right as to the cause—the water-supply,—how is it that the same water should at one time produce diarrhœa and on this occasion cause enteric fever? There must be something atmospheric to have influenced it. In trying to explain the matter to my non-professional friends here in the local authority, I used as a simile the action of six grains and a sixth of a grain of calomel, and argued that sewage might in the same way vary as to its effects. Although tainted water was suspected to have been the agent in the production of fever, all the gullies in the sewers have been ordered to be trapped, and the sewage completed at the town head. The sanitary staff is to be increased, and new works towards an increased water-supply are in active progress. It is just four years since I sent in a voluntary report to the local authority on the water-supply, and foretelling then what has happened now. The only thing that surprises me is that it did not occur sooner.

J. W.

THE GENERAL ELECTION AND POOR-LAW MEDICAL REFORM.

To the Editor of THE LANCET.

SIR,—It is now several months since, through your columns, I addressed my Poor-law medical brethren on the subject of reform in that branch of Poor-law administration. I have been silent, as the conviction has been forced on me by the proceedings in St. Stephen's during the last two years, and notably in the last session, that nothing in the shape of beneficial legislation was to be expected from the Parliament which has just come to an end, and I therefore considered it was not worth while to waste time and energy in what would have been profitless agitation.

It was, however, my intention at an early date to have convened a general meeting of the Association for the purpose of arranging a concerted scheme of action at the general election which was known to be imminent. The unexpected manner in which Mr. Gladstone has decreed a dissolution has deprived me of that opportunity. I have therefore no alternative but to ask you to permit me to remind the Poor-law Medical Service that there are three objects of the Association which have been repeatedly endorsed at our quarterly and general meetings, the advisability of supporting which should be pressed on the attention of candidates, and particularly on candidates for counties. They are—

1st. The *entire* instead of partial payment of salaries from the Consolidated Fund.

2nd. An amendment of the Superannuation Act, rendering it absolute on the part of boards of guardians, and that the amount should be determined previous to the officer tendering his resignation.

3rd. The extension to the rural districts of the dispensary system, which has been found to work so advantageously for the poor and the profession in the metropolis.

If this is to be done effectively, it can only be by each Poor-law medical officer writing to the candidate for representation of his borough or county, immediately on reading this.

I am, Sir, yours obediently,

Dean-street, Soho, Jan. 28th, 1874. JOS. ROGERS.

POOR-LAW MEDICAL OFFICERS AND MEDICAL OFFICERS OF HEALTH.

To the Editor of THE LANCET.

SIR,—When the appointment of medical officer of health was determined upon by our board of guardians, they sent for their district medical officers (six in all), and asked them if they were disposed to accept the appointment, each for his own district. It was then and there agreed that they should be appointed, and the salary which the present sanitary officer receives—£250—be equally divided between them. Well, there was great satisfaction at having their past services acknowledged and the hope of being better paid in future, when, lo and behold! down comes a notice from the Local Government Board refusing to allow the appointments, on what ground I know not, but I should

suppose they considered one man would do the work more efficiently than six, and so they were cast aside. Now comes the singular part of it. The happy man who gained the appointment—one of the six—now writes to the others to know if they will give him information upon individual cases of the causes of deaths which occur in their districts, when it is supposed to be fever or other infectious disease. Now, Mr. Editor, without wishing to be discourteous to their colleague, are they bound to give the information, and can the guardians compel them to consider it part of their duty to give it either upon private or union cases? Do you advise that they should take the opportunity, *bonne volonté*, and give their brother in distress the aid he asks for?—I am, Sir, your obedient servant,

Jan. 21st, 1874. A MEDICAL MAN.

*** The questions asked by our correspondent are not without difficulty. The guardians can unquestionably call upon any Poor-law medical officer under the Order regulating his duties for "any such written report relative to any sickness prevalent among the paupers under his care, as the guardians or the Commissioners (now Local Government Board) may require of him." Any such return being obtained by guardians, as Poor-law authorities, may no doubt be transferred to themselves, for their information as Sanitary Authorities. But as the Order regulating the duties of a district medical officer was issued long previous to the passing of the Public Health Act of 1872, any such application of its provisions to the use of the guardians, as a sanitary authority, would be an injustice of the highest degree to the medical man. But that the attempt is being made in some such way to extend the application of the Order setting forth the Poor-law medical officer's duties we have reason to know, for we have this week received copies of a return sent to the district medical officers of one of the large combined medical officer of health's districts, by direction of the guardians, with instructions that the return should be filled up monthly and forwarded to the medical officer of health. This return is headed "*Rural (Urban) Sanitary District*," and we cannot conceive that the guardians as a sanitary authority, or as Poor-law authorities, can call upon the Poor-law medical officers to make returns to the sanitary authority. The whole question is one of such great moment to Poor-law medical officers that we should advise them at once to take action in this business, and ascertain from the Local Government Board how they stand with regard to these returns. The return sent to us is printed by Knight and Co., and suggests by its form a Central origin. If this surmise be true, the action of the guardians in issuing it looks very much like, as the correspondent who sends it thinks, the introduction of the thin edge of the wedge; in other words, that the Poor-law medical officers are to be called upon to supplement, without remuneration, the work of the medical officer of health, and to be made scapegoats of the radically false policy of the Local Government Board in public health administration. As to the question of courtesy, we hold that such assistance as one medical man may reasonably require from another in the pursuit of his duties should be rendered, but that a medical officer of health derogates from his professional status if, pending final decision of the Local Government Board or of the Legislature as to the position of the Poor-law medical officer in the working of the Sanitary Acts, he asks from him anything more than is absolutely necessary. We would even go further, and say that he would consult his own dignity and the dignity of the profession better, in respect to the information he most needs from the Poor-law medical officer, by seeking permission from the guardians to examine the Poor-law medical officer's books from time to time, than by trespassing upon his courtesy, to the injury of his professional brother, and to relieve a gross blunder of the Central Administration.—ED. L.

THE WEBB FUND.

To the Editor of THE LANCET.

SIR,—The following is a list of the actual amounts received by me as Treasurer to the "Webb Fund" to present date. I shall feel obliged if you will find a place for them in your columns. I have enumerated them in the order in which they have been received.—I am, &c.,

AUGUSTUS CHURCHILL.

11, New Burlington-street, W., Jan. 28th, 1874.

	£	s.	d.
Mr. Churchill	10	10	0
Sir Wm. Jenner, Bart.	20	0	0
Sir James Paget, Bart.	10	10	0
D. D., per Sir J. Paget	10	10	0
Mr. J. Warwick	5	0	0
Dr. J. W. Ogle	5	5	0
A Friend	1	1	0
Dr. Leared	3	3	0
Dr. Burrows	10	10	0
Mr. Hy. Morley	1	1	0
Dr. Stocker	20	0	0
Messrs. Pardon and Son	5	5	0
Dr. Symes Thompson	2	2	0
Mr. H. Gore	5	0	0
Mr. T. M. Stone	2	2	0
Mr. J. T. Clover	10	10	0
Mr. Edwin Saunders	5	5	0
Dr. Hughlings-Jackson	5	5	0
Mr. Collinson	1	0	0
Sir Henry Thompson	20	0	0
Dr. Martyn	10	10	0
Dr. Wilks	1	1	0
Mr. R. Baker	2	2	0
Dr. Fayrer	5	5	0
Dr. Bisset Hawkins	10	10	0
T. E. W.	21	0	0
F. E. W.	21	0	0
Mr. H. S. Hughes	1	1	0
Mr. W. S. Roots	2	0	0
Dr. Habershon	5	5	0
Dr. R. P. Cotton	2	2	0
Mr. T. Stokes	1	1	0
Mr. Pye Chavasse	2	2	0
Editor of *Edinburgh Medical Journal*	2	2	0
Mr. T. B. Curling	5	5	0
Dr. C. J. B. Williams	20	0	0
Dr. Edis	1	1	0
Mr. E. Bradford	5	5	0
Mr. T. Underwood	10	10	0
Mr. Hugh W. Statham	5	5	0
Sir Thomas Watson, Bart.	10	10	0
Mr. R. King Pierce	2	2	0
Dr. Julius Pollock	3	3	0
Dr. Oliver	1	1	0
Dr. Elam	10	10	0
Sir Curtis Lampson, Bart.	25	0	0
Mr. G. C. Lampson	10	0	0
Mr. Henry Lampson	20	0	0
Mr. J. Lindsay Bennet	10	10	0
Messrs. Barnett, Hoare, and Co.	10	10	0
Mr. W. T. Rigg	5	5	0
Mr. E. Goad	5	5	0
Mr. J. Joseph	5	5	0
Baron Stern	3	3	0
Mr. J. W. Ford	2	2	0
Dr. Hall	1	1	0
Mr. C. Groucock	1	1	0
Messrs. Patry and Pasteur	5	0	0
Mr. J. H. Willock	1	1	0
Dr. Moxon	10	10	0
Dr. Parkes	5	0	0
Mr. J. Chatto	2	2	0
Dr. P. Frank	5	5	0
Dr. G. Harley	3	3	0
Mr. Kiellmark	1	1	0
Mr. W. Pretty	1	1	0
Mr. H. P. Roberts	10	10	0
Dr. Dow	1	1	0
Mr. John Cross	10	10	0
Mr. John Simon	5	0	0
Dr. T. B. Peacock	10	0	0
Mr. Thomas Smith	5	5	0
Mr. Morrant Baker	2	2	0
Mr. H. S. Giffard, Q.C.	5	5	0
Mr. C. O. Humphreys	5	5	0
Mr. Daniel Morgan	1	1	0
Dr. Marcet	3	3	0
Dr. Buzzard	2	2	0
Dr. J. W. Moore	0	10	6
Mr. Allingham	3	3	0
Dr. Clapton	3	3	0
Prof. Laycock	2	2	0
Editor of *Students' Journal*	1	1	0
Proprietors of *Medical Times and Gazette*	50	0	0
Mr. Toulmin	3	3	0
Mr. Le Gros Clark	3	3	0
Mrs. Druitt, sen.	3	3	0
Miss Druitt	2	2	0
Dr. Gavin Milroy	2	0	0
Mrs. Price	2	2	0
Dr. David S. Price	3	3	0
C. T. 69	3	3	0
Dr. W. H. Day	2	2	0
Messrs. Worthington & Sons	5	0	0
Mr. William Adams	5	5	0
Dr. Coates	5	5	0
Mr. P. Hambro	10	10	0
Mr. Charles Bowman	10	0	0
Mr. William Bowman	2	0	0
Mr. T. Craddock Watson	1	0	0
Miss Watson	1	0	0
Mr. W. S. Watson	2	2	0
Dr. Cholmeley	20	0	0
Dr. Maurice Davies	3	3	0
Mr. T. Carr Jackson	5	5	0
Sir W. Baynes, Bart.	2	0	0
G. B.	1	1	0
Mr. Robert Loder	5	0	0
Mr. E. L. Cox	5	0	0
Mr. Richard Twining	5	5	0
Mr. S. H. Twining	5	5	0
C. H.	1	0	0
J. C.	0	10	0
Mr. W. W. Richardson	2	0	0
Mr. F. Banbury	5	5	0
Messrs. Sanderson and Co.	5	5	0
Messrs. B. F. Babcock & Co.	5	0	0
Mr. J. R. Reeves	5	5	0
Messrs. Chalmers, Guthrie, and Co.	5	0	0
A Friend	1	1	0
Mr. Osgood Field	2	2	0
Mr. Thomas Angell	1	1	0
Captain Poole	1	1	0
R. T.	3	3	0
Mr. Robert Crawshay	5	0	0
Mr. Arthur Soames	5	5	0
Messrs. Alexander, Cunliffe, and Co.	5	0	0
Mr. Russell Sturgis	5	0	0
Mr. W. Basting	2	2	0
Mr. F. A. Shröeter	5	5	0
Messrs. Oliverson, Aukland, and Co.	2	2	0
Mr. G. E. Scrasmanga	5	0	0
A Friend	1	1	0
Mr. J. S. Morgan	5	0	0
Messrs. Morton, Rose, & Co.	5	5	0
Mr. C. C. Gooch	2	2	0
W. W.	2	2	0
Proprietors of THE LANCET	25	0	0
Total	£800	19	6

AMPUTATION AT THE HIP-JOINT BY ESMARCH'S METHOD.

To the Editor of THE LANCET.

SIR,—Having occasion last week to amputate the left leg of a youth eighteen years of age at the hip-joint for malignant disease of the femur, I did so by Esmarch's method, and the result was so satisfactory that I desire to record the case, more especially as, so far as I am aware, this is the first time amputation at the hip-joint has been performed by the bloodless method. The tumour was a very large one, and the limb œdematous. The elastic bandage

was applied from the toes to the perineum, a good-sized pad of linen placed over the aorta, just below the umbilicus, and seven or eight turns of elastic tubing made over it. Not a drop of arterial blood was lost till the ligature was loosened, and then only one vessel spouted, all the others having been secured. When the femoral vessels were divided, about two ounces of venous blood escaped. No inconvenience was experienced from the application of the tubing tightly round the belly, and after the operation neither the lad's countenance nor his pulse indicated that any great shock had been sustained.

I am indebted to Dr. Page, the house-surgeon to the Newcastle Infirmary, for suggesting to me to try Esmarch's plan in this case.

I am, Sir, yours faithfully,
CHARLES J. GIBB, M.D.,
Consulting Surgeon to the Newcastle Infirmary.

Westgate-street, Newcastle-on-Tyne, January, 1874.

MR. GAMGEE'S REPORT ON ANTISEPTIC SURGERY.

To the Editor of THE LANCET.

SIR,—If I interpret aright Mr. Gamgee's letter in your issue to-day, he implies that I treated him unhandsomely in returning the proof of his second paper unaltered, and then complaining in your columns of its contents.

It was, however, distinctly stipulated by Mr. Gamgee at the outset, that my corrections of the proof were to refer merely to statements of fact; and these in his second paper were contained only in a report of a case furnished at his request; and as I had myself drawn it up, and your printer had been accurate, I had no alterations to suggest.

But, independently of the original understanding, it would obviously have been most unsuitable for me to have interfered with Mr. Gamgee's comments; while it is equally clear that I was entitled to utter a public protest against them.

I am, Sir, yours, &c.,
Edinburgh, Jan. 24th, 1874. JOSEPH LISTER.

LIVERPOOL.

(*From our own Correspondent.*)

THE African royal mail steamer *Elmina* arrived in the Mersey on the 26th inst., from the Gold Coast. Her news, however, from the Ashantee war has been anticipated by telegraph from Lisbon. She brings two passengers, but no military or naval invalids. During her homeward voyage six deaths occurred amongst the crew; of these five were from African coast fever and one from typhoid fever of eight days' duration. The fever that has prevailed on board ships arriving from the Gold Coast during the past few months has been of a very malignant type, and the mortality has consequently been unusually great.

The deaths from fever on board the *Elmina* occurred between December 19th and January 3rd, and the duration of the disorder varied between two and five days. The disease appears to have been ushered in by severe frontal headache, followed by pain in the epigastric region, bilious vomiting, delirium, and great prostration. It is worthy of note that all the fatal cases of African fever occurred amongst the firemen and others engaged in the engineers' department, who work and live separately from the ordinary seamen.

There is a piece of false economy practised in some of these mail steamers from the coast of Africa, which on all grounds cannot be too strongly condemned. The surgeon of the ship has, in addition to his own duties, to perform those of purser, the latter official only existing in the person of the medical officer. Such an arrangement as this, in ships trading and carrying passengers in a part of the world so notoriously unhealthy, is highly improper. The experience of the last few months justifies a conclusion that there is quite enough for the medical officer to do in looking after the lives of his passengers and crew, without having his mind and time occupied by attention to such very opposite duties as those performed by the purser of a ship.

The *Elmina*, on her arrival in the Mersey, was inspected by the medical officer of quarantine for the port, after which she was at once admitted to pratique by the Customs authorities.

January 27th, 1874.

Obituary.

JOHN JONES PHILLIPS, M.D.

AMONGST the many recent losses which our profession has to deplore, not one has struck more sadly than that of Dr. Phillips. In him medicine, a stern exacting mistress, counts another victim. That he worked beyond his force is certain. The success which he had earned by more than ordinary labour imposed upon him unceasing toil, and in the vain endeavour to keep pace with increasing calls by increasing industry, he wasted his strength in the unequal task, and died literally in harness.

Upon hospital duties, which he performed zealously, he accumulated scientific and literary work, and an active practice. On Wednesday, January 21st, he complained of headache and sickness, and though he saw some patients at his house, he was not able to go out, and went to bed early. Paying little attention to these indications of cerebral disturbance, he forbad his servants to call in any of his medical friends, saying he should be better after a night's rest. When called next morning he was unconscious, and the colleagues who were soon around his bed found him in deep coma, with contracted pupils, stertorous breathing, and paralysed limbs. A murmur at the apex of the heart, the evidence of long-standing heart disease, was still heard. The opinion formed was, that embolism or a fragile state of the arteries had led to extensive cerebral hæmorrhage, filling the ventricles, and pressing on the medulla. He never regained consciousness, and died about three in the afternoon of Thursday, the 22nd inst., before his friends from Wales could reach him. A lamentable instance, amongst many, of abandonment of self-perception or the instinct of self-preservation in the absorbing pursuit of observing and tending the ailments of others. For three weeks down to the Tuesday night preceding his fatal attack he had spent every night in attendance upon a patient at some distance in the country, and working as best he could in the day. No wonder that he sank in the conflict. Few constitutions, howsoever robust, can withstand long-continued strain upon both the physical and intellectual parts. And Dr. Phillips was not robust. Whilst a student he became aware that he was the subject of organic heart disease, and he had ever since disregarded the anxious warnings of his friends to moderate his work. A few months ago an attack of aphasia gave warning of danger. Under the care of his friends Dr. Daldy and Dr. Hilton Fagge these symptoms soon passed off, and he resumed his engagements.

As his name testifies, he was a Welshman. He was educated at Mill-hill, matriculated at the University of London in 1860, and was articled to Mr. Pye-Smith, an eminent practitioner, first in the City and now in Hackney. It deserves to be recorded to this gentleman's honour, for such success can hardly be attributed to happy accident, that no less than four of his pupils have become physicians to Guy's Hospital. These are Dr. Habershon, Dr. Pavy, the subject of our memoir, and Dr. Pye-Smith, his son.

Dr. Phillips passed an unusually brilliant examination for the licence of the Royal College of Physicians, became a member in 1868, and took the M.D. degree at the University of London. He was a gold medalist in Obstetrics, and it was to this branch of medicine that his studies and his practice were chiefly directed. But he had spared no pains to become well informed in the whole range of medicine. He was appointed demonstrator of anatomy to the school of Guy's. He settled in practice in Finsbury-square. In 1869 he was made assistant obstetric physician to Guy's. In the same year he succeeded Dr. Barnes as physician to the Eastern Division of the Royal Maternity Charity, the largest obstetric institution in England. Shortly afterwards he became consulting obstetric physician to the Tower Hamlets Dispensary, and assistant-physician to the Hospital for Sick Children in Great Ormond-street. In all these onerous offices

he worked with only too much zeal. He filled the office of Secretary to the Hunterian Society, and of the Obstetrical Society. To the latter post he had been re-elected for a third year only a few days before his death. He was an admirable secretary. He had the charm of a good reader; he was always happy and judicious in debate; he was singularly rich in knowledge, accurate in record, and logical in exposition. No veteran was more respected, or listened to with more attention. Indeed few minds so young are so well stored with material so well commanded. He contributed several valuable memoirs to the Transactions of the Obstetrical Society, and to the Transactions of Guy's Hospital. Amongst these may be mentioned the following:—"On the Natural History of Ovarian Disease, with Post-mortem Records of 88 cases," 1867; "On Retroflexion of the Uterus as a Cause of Abortion," 1872; "On the Mortality after Obstetric Operations" (with Dr. Hicks), 1871; "On Sudden Death from Syncope after Labour," 1873; "On the Treatment of Puerperal Convulsions without Bleeding," 1873. These are all of sterling merit.

Dr. Phillips died at the age of thirty-one, consumed by work which, if it had been spread over ten years more, must have infallibly carried him to the highest position as a teacher and as a consulting physician. He had won by a certain gentle ease and charm of manner, by an agreeable personal appearance, by the straightforwardness and steadiness of purpose which shone in all he did, the confidence alike of the public and of his professional brethren. By all his loss will be deeply regretted. It is no formal repetition of a trite phrase to say that in the obstetric world his place will not be easily filled. He was unmarried. His body was received at the station by a crowd of friends, and was conveyed to the place of his birth in Wales.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examinations for the diploma, were duly admitted Members of the College on the 22nd and 23rd inst.:—

Alderton, Thomas G., Great Ormond-street.
Andrews, Samuel, King's-road.
Bryan, Clement F., L.S.A., Humberston.
Churchward, Alfred, L.S.A., Anerley.
Ford, Montagne, L.R.C.P., Bedford.
Gard, William J., Devonport.
Hartley, Edward B., Warwick-square.
Howitt, Henry, M.D., Ontario, Canada.
Hutchings, Edward J., Dorchester.
Joseph, George W., L.S.A., Liverpool.
Lang, William, Exeter.
Maudsley, Joseph, Leicester.
May, William A., L.S.A., Stoke, Devonport.
Morris, George, Wigan, Lancashire.
Needham, Walter, Manchester.
Oliver, John P., M.D., Dublin.
Owgan, Francis A., Regent-square.
Parakh, Dhanjisha N., L.R.C.P., Bombay.
Phillips, James W., Heygate-street.
Pitts, Thomas S., Leeds.
Roe, Edward, Cambridge.
Sargent, George, Upper Baker-street.
Seccombe, George S., Brixton, Surrey.
Strickland, Arthur W., Stratford.
Triggs, John B. B., L.S.A., Falmouth.
Whitaker, James S., L.S.A., Kingsland.
Whitmore, William T., Norris-street.
Wigan, George, Portishead, Somerset.

Of the 91 candidates examined during last week, 26 failed to satisfy the Court of Examiners, and were referred for six months' further professional study.

Professor Erasmus Wilson, F.R.S., will commence his course of six lectures on "Dermatology" on Monday next, at 4 P.M. Mr. W. K. Parker, F.R.S., will afterwards deliver eighteen lectures on the "Structure and Development of the Skull of the Vertebrata," commencing on Monday, Feb. 16th. The lectures will be delivered in the theatre of the College on each Monday, Wednesday, and Friday until completed.

THE Commissioners of National Education for Ireland have appointed Dr. Charles A. Cameron to be Lecturer on Agricultural Chemistry and Geology in the Albert Agricultural Institution, Glasnevin, in the place of Professor Sullivan, who has been appointed President of the Queen's College, Cork.

AT the annual meeting of the supporters of the Liverpool Northern Hospital held last week, it was stated that the affairs of the institution were in a very satisfactory condition. The amount received last year from the Hospital Sunday Fund was £1440, and it was confidently expected that this year it would be considerably greater.

BEQUESTS TO MEDICAL CHARITIES.—Mr. William John Hutchinson, of Newcastle-upon-Tyne, has bequeathed £25,000 to the Infirmary, £10,000 to the Dispensary, £500 to the Children's Hospital, £500 to the Lying-in Hospital, £500 to the Indigent Sick Society, and £500 to the Eye Infirmary, all at Newcastle; £2000 to the Prudhoe Convalescent Home, Whitley; and £15,000 to the Ingham Infirmary, South Shields.

PRESENTATION.—On Friday, the 9th inst., at a large meeting of the officers, attendants, and servants connected with the Kent County Lunatic Asylum, a handsome silver claret jug was presented by the superintendent to David Hughes, Esq., on his retirement from the position of assistant medical officer. Dr. Kirkman dwelt very eloquently on the efficient manner in which Mr. Hughes had for nine years discharged his duties with uniform attention and kindness both to the patients and to all in any way connected with the asylum, and, as a proof of the esteem felt for him, stated that every officer and servant in the establishment had contributed towards this presentation. The claret-jug bears the following inscription:—"Presented to David Hughes, Esq., by the officers, attendants, and servants of the Kent County Lunatic Asylum, on his retirement from the medical staff of that institution, after a period of nine years, as a mark of their esteem and regard. December, 1873."

CLERICAL, MEDICAL, AND GENERAL LIFE ASSURANCE SOCIETY.—From the report of the directors recently issued, it appears that during the year ending June 30th, 1873, new assurances were effected for £304,457, producing in new annual premiums £9770 5s. 11d. The ordinary income of the year was raised, by an increased receipt of premiums, from £247,111 3s. 7d. to £249,842 19s., while the gross receipts were further augmented by an exceptional profit of £2721 0s. 2d. The rate of interest was well maintained. It averaged £4 7s. 10d. per cent. on the funds invested, and £4 4s. 1d. per cent. on the whole of the funds, including those which, being uninvested, were not productive. The claims by death, which amounted to £140,722 5s., were again within the estimated amount. The expenses were even more than usually moderate. The whole outlay, including commission, fell below 7 per cent. on the income, and was relatively a smaller charge on the business than in any previous year. The receipts and payments having been thus alike favourable, the surplus income was considerable. It amounted to £69,547 8s. 3d., and increased the assurance fund to £1,880,104 17s.

Medical Appointments.

AUSTIN, S. C., M.R.C.S.E., has been appointed Medical Officer for the Southern District of the Godstone Union, vice Harris, resigned.

BECK, J. T., M.R.C.S.E., has been appointed Medical Officer for the third District of the Cambridge Union, vice Green, deceased.

BLASSON, T., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Osbournby District of the Sleaford Union, Lincolnshire, vice Brocklesby, resigned.

BRACKENRIDGE, Dr. D. J., Physician to the Royal Hospital for Sick Children and to the New Town Dispensary, Edinburgh, has been elected an Assistant-Physician to the Royal Infirmary, vice Dr. Thos. R. Fraser, resigned.

DUNCAN, A., M.R.C.S.E., has been appointed House-Physician to the Seamen's Hospital, Greenwich, vice Lewtas, resigned.

FISHER, F. R., M.R.C.S.E., has been appointed Second Assistant-Surgeon to the Victoria Hospital for Sick Children, Chelsea, vice Roberts, resigned.

FRENCH, H., M.R.C.S.E., has been appointed Medical Officer for the Hedgerley District of the Eton Union, vice Wand, resigned.

FURLONG, N., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer to the Workhouse, Enniscorthy Union, Co. Wexford, vice O'Rourke, resigned.

GREAVES, E., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Weldon District of the Oundle Union, and the E District of the Thrapston Union, vice Bailey, resigned.

HARDWICKE, H. J., L.R.C.P., L.F.P. & S. Glas., has been appointed Medical Officer for District No. 2 of the Ecclesall Bierlow Union, vice Meller, resigned.

HARRER, Dr. C. J. J., has been appointed Honorary Medical Officer to the Eastern Dispensary in connexion with the German Hospital, Dalston, vice Dr. A. Rasch, resigned.

HARVEY, C. W., M.B., L.R.C.P.L., M.R.C.S.E., has been appointed Resident Medical Assistant at the Dundee Royal Infirmary, vice Carr, resigned.

HEMSTED, H., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Overton District of the Whitchurch Union, Hants, vice Hayward, resigned.

HOPGOOD, T. F., L.R.C.P.L., M.R.C.S.E., has been appointed a Surgeon to the Sunderland Eye Infirmary, vice Yeld.

HYNES, A. M., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer to attend Home Patients of St. Mary's Hospital and Dispensary for Women and Children, Manchester, vice Boutflower, whose appointment has expired.

KIRK, W., M.R.C.S.E., has been appointed Medical Officer for the Hedon District of the Sculcoates Union, vice Cantley, deceased.

NOOTT, W. M., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for District No. 1 of the Cardigan Union, vice W. L. Nootl, M.R.C.S.E., superannuated.

O'CONNOR, B., A.B., M.D., C.M., L.M., has been appointed Physician to the Welshpool Dispensary.

OSBORN, C., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer of Health for the Bognor Urban Sanitary District for three months: £52 10s. per annum.

PERKINS, W., M.R.C.S.E., has been appointed Assistant Medical Officer to the City of London Lunatic Asylum, Stone, vice Weatherhead, resigned.

SHAPLEY, H. T., L.R.C.P.Ed., M.R.C.S.E., has been appointed a House-Surgeon to the London Hospital, vice Morgan.

SMITH, R. A., M.D., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed a Surgeon to the Lying-in Charity, Sunderland, vice Yeld, resigned.

VENN, Dr. A., has been appointed House-Physician to the Hospital for Women, Soho-square, vice Gairdner, resigned.

WILLS, T. M., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Assistant-Surgeon to the 15th Regiment of Lancashire Rifle Volunteers.

WILSON, G., M.R.C.S.E., has been appointed Medical Officer of Health for the Clutton Rural Sanitary District: £230 per annum for three years; acreage 42,287; population 19,714.

Births, Marriages, and Deaths.

BIRTHS.

BARRIE.—On the 22nd inst., at Elmbank, Dumfries, the wife of Andrew D. Barrie, M.B., C.M., L.R.C.S.Ed., of a son.

CRINGLE.—On the 25th inst., at Mile-end-road, the wife of Dr. W. H. Cringle, of a son.

DUDLEY.—On the 22nd inst., at Belgrave-road, the wife of J. G. Dudley, M.D., of a son.

MEGGET.—On the 26th inst., at Scarborough, the wife of A. Megget, M.R.C.S.E., of a son.

ORTON.—On the 22nd inst., at Crouch-end, Hornsey, the wife of F. Orton, M.D., of a daughter.

SMITH.—On the 11th inst., at Halifax, Nova Scotia, the wife of P. Broke Smith, M.D., Surgeon-Major 87th Fusiliers, of a daughter.

SPURGIN.—On the 25th inst., at Henrietta-street, Cavendish-square, the wife of Frederick W. Spurgin, M.R.C.S., L.R.C.P., of a son.

SWANSON.—On the 27th inst., at Finkle-street, Thirsk, the wife of Geo. J. Swanson, M.D., of a daughter.

WHITE.—On the 23rd inst., at Blackmore, the wife of J. R. White, M.B., of a son.

MARRIAGES.

CURGENVEN—HARMAN.—On the 20th inst., at St. Matthew's, Ardwick, Manchester, William Grafton Curgenven, M.D., to Pamella Barrett, daughter of H. W. Harman, Esq.

FOX—STEPHENS.—On the 17th inst., at Stoke-Fleming Church, Devon, Cornelius B. Fox, M.D., of Chelmsford, to Annie Frances, youngest daughter of Vice-Admiral Stephens, of Warfleet, near Dartmouth.

HUME—SUTCLIFFE.—On the 13th inst., at the Moravian Church, Bedford, John Collins Hume, L.R.C.P.Ed., to Grace Elizabeth, daughter of the Rev. C. E. Sutcliffe.

MAYNARD—M'ADAM.—On the 28th inst., C. Dudley Maynard, M.R.C.S.E., to Emily Darell Louisa, daughter of Christopher M'Adam, Esq.

DEATHS.

BEAUMONT.—On the 23rd inst., John Beaumont, M.R.C.S.E., of Cheshunt, aged 65.

BROWN.—On the 17th inst., Edward Brown, M.D., of Gateacre Brow, Liverpool.

BYWATER.—On the 19th inst., suddenly, at Lanehead, Coniston, Lancashire, Robert Turner Bywater, L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., aged 49.

HARRIS.—On the 19th inst., at Bolton-street, Bury, Lancashire, Herbert Robey Harris, M.R.C.S.E., aged 42.

LEE.—On the 19th inst., N. B. C. Lee, M.R.C.S.E., of Hanley-road, Hornsey-rise, aged 52.

MORRIS.—On the 21st inst., Wm. Morris, M.R.C.S.E., of Petworth, Sussex, aged 53.

WINKWORTH.—On the 17th inst., at Great James-street, Bedford-row, F. S. Winkworth, Student at University College, Hospital, aged 24.

YATES.—On the 26th inst., W. Holt Yates, M.D., of Sumner-terrace, Onslow-square, and Wickersley, Yorkshire, aged 71.

BOOKS ETC. RECEIVED.

Mr. Canty on Diseases of the Skin.
Dr. Dupuy: Examen des quelques Points de la Physiologie du Cerveau.
Dr. Braidwood on the Domestic Management of Children.
Cassell's Illustrated Shakspeare.
Mr. Simpson: Meeting the Sun; a Journey all round the World.
Zeitschrift für Biologie.
The Leisure Hour. Sunday at Home.
The American Journal of the Medical Sciences.

METEOROLOGICAL READINGS

(Taken by Steward's Instruments).

THE LANCET OFFICE, JAN. 29TH, 1874.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8 A.M.
Jan. 23	30·27	W.	45	45	...	51	38	...	Overcast
„ 24	30·15	W.	49	50	...	53	44	0·03	Rain
„ 26	30·49	WNW	39	41	...	49	33	0·20	Fine
„ 27	30·48	N.W.	47	49	...	51	39	...	Fine
„ 28	30·57	N NW	45	46	...	48	41	...	Overcast
„ 29	30·43	WNW	44	45	...	...	44	...	Overcast

Notes, Short Comments, and Answers to Correspondents.

DISEASE IN PARIS AT THE CLOSE OF 1873.

ACCORDING to Dr. Besnier's report, the constitution of the atmosphere in Paris during the closing trimestre of 1873 was mild, rather showery, and with the prevalent winds from the south-west. The ozonometric state showed nothing particular; humidity prevailed. Pleurisy, rheumatism, and puerperal affections were the most common. Respiratory ailments presented nothing salient, nor any epidemic manifestation. At the Val-de-Grâce phthisis of an aguish form was frequent; at the Gros-Caillou tuberculous granulitis. Diphtheritic affections were severe. Enteric fever was milder and less frequent than in former years. In the garrison of Aurillac, continued fever was common, enteric not so. The soldiers most seriously affected were volunteers; those engaged from one to five months furnished 40 cases per 100; those of six years' standing furnished only 1 per 100. Change of habit, novel modes of life, and such causes explain the more frequent illness of the volunteers. At the Cochin Hospital Dr. Bucquoy obtained good results in the treatment of enteric fever by vinegar lotions.

Historicus, (Leicester.)—There is a good history of the progress of medicine in Spain in the *British and Foreign Medico-Chirurgical Review* for 1861. Its author, we believe, is Dr. Charles Wilson, of Edinburgh.

M.D.—Apply to the Secretary of the Bethlehem Hospital, London.

PUBLIC HEALTH RETURNS.

To the Editor of THE LANCET.

SIR,—A letter on the above subject from Mr. Denny, medical officer of health, appears in your last issue. The writer there states that these returns are "easily obtained," and suggests that attendance "occasionally" at meetings of Boards of Guardians is all that is required for that purpose. Might I remark that it would hardly be a dignified course for a medical officer of health to pursue, especially with the chance of being refused admittance? To wait for information of the existence of epidemic or contagious disease for a guardians' meeting would hardly conduce to the greatest object a health officer should have in view—viz., arresting the progress of disease by the use of sanitary measures. Surely the simplest as well as the best mode of obtaining information, both as to the existence of disease and for the purpose of making these returns, is to ask the Board of guardians to order the relieving officers to give *immediate* information on the first outbreak, and to forward copies of their returns to the health officer. This has been done by the sanitary authority of which I am officer. With regard to returns of deaths, the district registrars might in like manner forward copies of their quarterly reports on forms provided for that purpose. Mr. Denny is afraid that the position of health officers may be looked upon as a sinecure; and certainly if their duties were performed in the leisurely manner he proposes, "the general public and many in the profession" would not be very far wrong.

I am, Sir, yours, &c.,

January, 1874. MEDICAL OFFICER OF HEALTH.

*** Our correspondent will find an article on the subject of his letter in another column.—ED. L.

MEDICAL CERTIFICATES OF DEATH, PLYMOUTH.

THE Deputy-Coroner very properly condemned a certificate given by a medical man, stating the cause of death of a patient he had not seen for a month. Mr. Square said he could not tell how anyone could give a certificate who had not attended during the illness. Certificates given in such a manner took away the protection due to the public.

Guy's.—Wormald's Natural Philosophy, or Galbraith and Haughton's smaller work on the same subject; Nicholson's Zoology; Henfrey's Botany. Work at the two latter practically—by dissection and in the fields, and not by book only.

A Country Practitioner.—Yes; the temperature of 110° F. in rheumatic fever has been exceeded. For example, Dr. Robert Macnab, of the Suffolk General Hospital, has recorded in our columns (THE LANCET, Sept. 6th, 1873) a case in which the temperature reached was 111·4° F., as registered by two thermometers, one in the axilla, and another between the scrotum and the thigh. This temperature, moreover, was maintained for ten minutes after death.

Mr. Herbert Major's paper shall be published very shortly.

A FRENCH DUEL.

Medio tutissimus ibis was certainly not confirmed in the case of the surgeon who, being present at the duel fought on the 23rd instant on the Swiss frontier between two Parisian gentlemen, received a wound while interposing inopportunely. The medical man, on seeing blood, was (according to the *Pall Mall Gazette's* Paris correspondent) either over-anxious to render his services, or wished to separate the adversaries, when he received a sword thrust in the thigh of a dangerous character. He forgot the sound policy expressed under similar circumstances by the Scottish publican in "Old Mortality," whose house was a place of resort for the covenanting peasantry and their Royalist suppressors: "The redder (mediator) aye gets the warst lick in the fray"—an experience verified by good old Mr. Pickwick when he placed himself between the editors of the *Eatanswill Gazette* and the *Eatanswill Independent*.

Mr. James Martin.—1. The new-comer calls on the resident practitioners of the place; but it is a custom that seems to be, practically, "more honoured in the breach than the observance."—2. We should say that it was scarcely in accordance with the dignity or etiquette of the profession to do so.

L. N. R.—We are not able to recommend such an Office.

THE TREATMENT OF MALIGNANT CHOLERA BY CALOMEL.

To the Editor of THE LANCET.

SIR,—I am anxious to record in a very brief manner some facts which came under my notice during a very severe invasion of cholera which occurred in this town and its immediate vicinity in 1854. 59 cases of the true type came under my immediate notice. Of this number, 56 were treated with calomel, if not all at the first onset of the symptoms, at any rate during their clear development. There were 21 deaths. Of these, 2 were moribund when visited, and almost incapable of swallowing; 2 others were women who had each completed the eighth month of pregnancy, both of whom gave birth to a child during the violence of the attack. In 2 instances only salivation occurred, although the amount of calomel given varied in the several cases from thirty to two hundred grains in fifty or sixty hours, if the patient endured so long. The appearance of bile in the ejecta was invariably an indication that the patient was safe. I rarely employed stimuli, as I had reason to believe they were of no avail in promoting reaction from collapse, and seldom could they be retained on the stomach. The calomel was given every ten or fifteen minutes in the form of pill, and in very young children in powder. I append two cases taken indiscriminately from my journal.

CASE 1.—Mrs. F——. Aug. 17th. Had diarrhœa the previous day, for which she had no medical advice, but took various messes recommended by her neighbours.—7 A.M.: Has had furious discharge during the night from the bowels. The discharge is colourless, and deluges the bed and bed-linen; cramps; cold; collapsed; eyes sunk in the head; countenance and extremities dusky; dark areolæ round the eyes; nearly pulseless. A calomel and opium pill was given at first, with sulphuric ether and tincture of opium; turpentine to the epigastrium, &c. The calomel and opium pill was soon rejected, and the mixture as soon as taken. She was then ordered a two-grain calomel pill to be taken every ten minutes, with a drop and a half of tincture of opium in a teaspoonful of cinnamon water. This treatment was carefully pursued during the whole day.—7 P.M.: Oozing of colourless fluid continues; cramps less; vomiting occasional. After taking sixty pills in two successive hours, she was ordered to take them every quarter of an hour.

Aug. 18th.—Has vomited occasionally during the night; colourless discharge continues, not so copiously; pulse faintly perceptible; extremities warm. Has drunk nothing but cold water. A little brandy-and-water was given by the nurse, but immediately rejected. The calomel and a teaspoonful of cold water, with one drop of tincture of opium, is the only thing which the stomach will retain. On turning down the bedclothes this afternoon, greenish matter was observed hanging round the anus; this was the first appearance of bile in the evacuations. To take a pill every hour.

19th.—Quiet night; no vomiting; has had one motion, reported to be of a dark colour; skin hot; complains of distressing weakness; has passed urine for the first time since the attack. Omit pills.

This patient recovered satisfactorily, having taken two hundred grains of calomel in forty-two hours.

CASE 2.—G. H——, aged thirty-five. Sept. 2nd, 10 P.M. Has had severe vomiting and rice-water motions. To take calomel powder every fifteen minutes.

Sept. 3rd.—Five motions in the night; vomiting ceased. Calomel every half hour.

4th.—Better. Omit calomel.

5th.—Relapse.—1 A.M.: Furious purging; rice-water stools; incessant vomiting; violent cramps; countenance dark and shrivelled; eyes sunk. Calomel every ten minutes.—10 P.M.: Pulseless; whole body cold and clammy; tongue cold; purging, vomiting, and cramp continue. Continue calomel.

6th.—10 A.M.: Slight indications of warmth; pulse just perceptible; no cramp; purging and sickness less. Continue pills; a little arrowroot and port wine occasionally.—9 P.M.: Purges greatly; sick, but no cramp; pulse very feeble; a little more warmth; very restless. Calomel every fifteen minutes instead of ten.

7th.—Purged much during the night; colour of evacuations dark green. Continue calomel.—9 P.M.: Symptoms much the same; purging rather less; mouth sore. Calomel every hour.

9th.—Motions black; urine appears for the first time since the 5th.

Recovered, with disposition to diarrhœa.

I may mention that after the second case I omitted to give the tincture of opium, and depended upon calomel alone.

I remain, Sir, yours truly,

Maldon, Sept. 26th, 1873. GEO. PARKER MAY, M.D.

Studiosus.—We do not think anything can be done in the matter. In which volume of Braithwaite's Retrospect did the article referred to appear?

A. B.—No.

D. M. F., (Monaghan.)—Letts and Co., Royal Exchange, London.

"H. KER, *pro* T. M. HARDING, F.R.C.S."

SUCH is the style of the signature attached to a certificate of the cause of death of an infant in the Caledonian-road. Mr. Harding is a Fellow of the Royal College of Surgeons, and Mr. Ker is his unqualified assistant. The names are not unfamiliar, as they have been before our readers in an account of the prosecution of Mr. Ker, at the instance of Dr. Slater, for using the title of "doctor," for which he was fined £5. Mr. Ker, however, though no longer using the false title, seems to carry on practice in the way of a "Provident Dispensary," under the shelter of Mr. Harding, and is not stopped even when he comes to the difficulty of a death certificate. He skims over it thus—"H. Ker, *pro* T. M. Harding, F.R.C.S." The registrar is instructed to put "not certified" after the cause of death when a certificate is not signed by a *qualified* practitioner. Rightly, therefore, he regarded the present death as uncertified, and it became the subject of a coroner's inquest, though the jury returned a verdict of "Death from natural causes." Dr. Lankester properly said that any amount of crime might be covered by such certificates. This matter calls for explanation from Mr. Harding.

Mr. F. Buckle, (Birmingham.)—Yes; in Paris the Minister of Public Works has just given his approbation to the establishment of a school of applied entomology at the Luxembourg.

INJECTION OF PERCHLORIDE OF IRON INTO THE UTERUS.

To the Editor of THE LANCET.

SIR,—On the 6th of December, 1870, I attended Mrs. W—— in her second labour. It was very lingering. The os was rigid, and was some time dilating. Pain being excessive, I administered chloroform occasionally. She progressed fairly, and I left her on the tenth day. On the twelfth flooding set in. I took with me a Higginson's syringe, and injected iced water. The hæmorrhage was soon controlled, and ceased in half an hour. I applied a binder and pad, ordered brandy to be given freely, and the horizontal position in bed to be strictly enforced. I sent her a mixture of ergot and tincture of perchloride of iron to be taken every four hours. On the following morning, at 5 A.M., the flooding had returned worse than ever. I took with me a syringe, and this time an ounce of strong tincture of perchloride of iron. She was in a state of collapse, and large quantities of blood were gushing out at frequent intervals; her pulse was so small and rapid that I could not count it. I at once injected iced water, and put pieces of ice in the vagina; but this appeared merely temporising. The case was one of imminent danger, and I hurried the husband to go immediately for my friend Mr. Spurgin. I almost feared she might be dead before he could return. I at once mixed the ounce of tincture of perchloride of iron with about half a pint of water, into which I had put a piece of ice, and injected it into the uterus. The flooding almost at once ceased. Mr. Spurgin arrived soon afterwards, and can testify as to the gravity of her symptoms. There was no recurrence of hæmorrhage, although she was so weak from the loss of blood that she was obliged to keep to her bed for two or three weeks, and her return to health was delayed for two or three months.

I have always attributed the patient's recovery to the injection of the perchloride of iron, which I had been induced to try, having then recently read Dr. Barnes's work on Obstetric Operations, wherein he advocates this method of arresting post-partum hæmorrhage. I have often since congratulated myself on having purchased this work, and I have read with surprise and dismay the disapprobation this treatment of flooding has met with by the profession. Dr. Barnes cordially invites the publication of any fatal case. Perhaps after Dr. Snow Beck's contributions it would be desirable to request medical men who have successfully injected the perchloride of iron into the uterus also to make known their experience, especially as one fatal case from such assumed cause attracts more attention than a dozen successful recoveries. In the one case it is too readily believed that it is the iron that kills; in the other, that the water with which the perchloride is mixed is the cause of cure.

On June 12th, 1873, I was called to F. H——, aged forty-three, who was said to be dying. I found her almost moribund, and in great pain over the uterus. I was told she had flooded. There was then no bleeding; but from the bed and linen there was evidence there had been hæmorrhage. On inquiry I found she had miscarried at the fourth or fifth month five days previously, and had only been attended by a poor woman, who very frequently officiates as a midwife. A medical man had been subsequently called in, but he did not examine her. I found the os dilated so as to admit two fingers, and small pieces of what appeared to be decomposed placenta protruding. I removed as much as possible. She appeared sinking. I recommended the medical man who had previously seen her to be sent for; but, I having seen the case, he declined to come. The poor woman died a few hours after my visit, I believe from septicæmia, and I certified such as the cause of death. Had perchloride of iron been injected, to its injection would probably been attributed the cause of death, and after Dr. Snow Beck's contribution I might have thought so too.

Yours truly,

January, 1874. F. H. ALDERSON, M.R.C.S.

F. G. S., (Plymouth.)—A case in which symptoms of poisoning resulted from the ingestion of snails was published in the *Montpellier Médical* o June last. The reporter, Dr. Dumas, seems to have taken all possible precautions against error as to the cause of the symptoms, which consisted of vomiting, diarrhœa, vertigo, hyper-pyrexia, &c., and which were manifested in seven persons simultaneously who had partaken of the snails.

Mr. W. Allan Jamieson, (Berwick-on-Tweed.)—The edition of Hippocrates in question, *curâ Reinholdi*, may be had of Williams and Norgate, or any foreign bookseller.

Pharmacien, (St. Austell.)—By a decree of the 12th of January, 1874, a Chair of Therapeutics has been added to the preparatory school of medicine and pharmacy at Angers.

Mr. Low, (Charlton Hospital.)—The paper shall receive attention.

M. O.—The law officers of the Crown, according to Glen (Law relating to Public Health) have interpreted the Common Lodging-Houses Act as extending to "that class of lodging-houses in which persons of the poorer class are received for short periods, and, although strangers to one another, are allowed to inhabit one common room." A beer-house giving lodging accommodation to fourteen or sixteen persons—in all probability strangers to one another—would, no doubt, notwithstanding its licence, come under the operation of the Act. The question is one, however, which should be determined by the Clerk of the Sanitary Authority, or by correspondence with the Local Government Board.

L.R.C.P.E.—The appointment is evidently suited only for a surgeon intending to settle, and the terms do not appear unreasonable. The return passage would be optional. The scale of rations appears to be fairly liberal.

Dr. Hughlings Jackson's paper shall be published next week.

CHOLERA THEORIES.

To the Editor of THE LANCET.

SIR,—Your valuable journal has a very wide circulation in India, both in the army and also among the civil surgeons. What they (your readers) will make out from your leading article of to-day on Cholera I don't know.

As an old executive medical officer in civil medical charge of the extensive Umballa district, I have for years administered on the "contagion" theory. In 1862, at Meean Meer in the Punjab, I was a doctor in an epidemic of cholera there. I had cholera there myself. From 1863 I have been medical tutor to a class of lads at the Umballa Dispensary, and have yearly taught, in the most impressive manner my knowledge of Hindoostanee would allow, that cholera was eminently contagious, and that water *could* be one of its vehicles. I have administered at immense religious fairs as a sanitary officer, always on the "contagion" theory of cholera. In fact, I have never wearied teaching both the contagiousness of cholera and also the necessity for as pure a water-supply as circumstances would allow. Dr. Cunningham himself knows me, and is aware I can say something about cholera when it is near its *supposed home*.

Yours faithfully,

Lancaster, Jan. 24th, 1874. R. BATESON, Surgeon-Major.

Mr. T. Osborne Walker.—We think it will be better for our correspondent to address his communication to the journal that has taken up the matter to which he refers.

Alexander.—Such a special apparatus possesses no market value. Our correspondent must consider the matter as a loss.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir H. Thompson, London; Dr. B. W. Richardson, London; Dr. George Harley, London; Dr. Braxton Hicks, London; Dr. Symes Thompson, London; Prof. Lister, Edinburgh; Dr. R. Barnes, London; Dr. Hughlings-Jackson, London; Mr. Edwards, London; Dr. Buzzard, London; Dr. Maunsell, Woolwich; Deputy Inspector-General Donnet; Mr. Montague; Dr. Lyon Playfair, Edinburgh; Dr. Squire, London; Dr. Wiltshire, London; Mr. Walker, Crick; Mr. A. Churchill, London; Dr. A. Hill, Birmingham; Mr. Wigg, Essex; Mr. L. Winslow, London; Mr. F. Page, Newcastle; Mr. H. Major, West Riding Asylum; Dr. C. J. Gibb, Newcastle; Mr. Morton, London; Mr. Ginders, Normanton; Dr. Waters, Liverpool; Mr. Ford, Bedford; Dr. Davies, Ebbw Vale; Mr. Evans, Seaforth; Mr. Gaskell, St. Helens; Mr. Pettinger, Manchester; Mr. French, Northwich; Dr. H. Sylvester, London; Mr. Callant, Bridgnorth; Mr. Prowse, Woolton; Mr. Anderson, Dover; Dr. Coats, Sirhowy; Mr. Clarke, Putney; Mr. Major, Wakefield; Mr. York, London; Mr. Thomas, Narberth; Dr. Strange, Shrewsbury; Dr. Wylie, Oldham; Mr. Farrago, Chippenham; Mr. Cheese, Coleford; Mr. Fox, Bedford; Mr. Clarke, Coniston; Dr. M'Call Anderson, Glasgow; Dr. Maclagan, Hexham; Mr. Jamieson, Berwick; Dr. Luce, Uxbridge; Mr. Watson, Cambs; Dr. Gustavus Fritsche; Dr. Woodward, Worcester; Dr. Barrie, Dumfries; Mr. Galton, London; Mr. Craven, Thurso; Dr. May, Maldon; Mr. North, Nottingham; Mr. Skey, Reading; Dr. Hardwicke, Sheffield; Mr. Atkinson, Rippenden; Mr. Goodall, Leeds; Mr. Leney, Strabane; Mr. Owens, East Farleigh; Mr. Fitzgerald, St. Ives; Dr. Dick, London; Mr. Kempthorne, Callington; Dr. Woodman, Deal; Mrs. Smith, Dublin; Dr. Dickson, Buxton; Mr. Barlowe, Birmingham; Dr. C. Black, Glasgow; Mr. Basteon, Crewkerne; Mr. Yates, Oldham; Mr. Williams, Talgarth; Mr. Morris, Honiton; Mr. Benson, Uley; Mr. Horton, Dudley; Dr. Moffat, Hawarden; Mr. Saffield, Stafford; Mr. Blakeney, Sallymount; Mr. Gregory, H.M.S. *Spiteful*; Mr. Tivy, Cork; Dr. Black, Edinburgh; Dr. Sturges, London; Mr. Lipscomb, Tring; Mr. Charlesworth, London; Mr. Feldman, London; Mr. Finlayson, Rio Demerario; Mr. P. Smith, Shipton Mallet; Mr. Low, Chorlton; Dr. Stevens, London; Dr. Gowers, London; Mr. Marshall, Nottingham; Dr. Sabben, London; Mr. Bolas, London; Mr. Hamilton, Liverpool; Mr. Hardyman, Leicester; Dr. Benson, Queenstown; Mr. Robinson, Dublin; Mr. Harrison, Liverpool; Dr. Adams, London; Dr. M'Carthy, Teddington; Dr. Mackintosh, Chesterfield; Messrs. Storrer and Scott, Dantzic; Dr. Mason, Sheffield; Mr. Wagstaffe, Swinefleet; Dr. Hunt, Fitzroy, Victoria; Dr. Boddington, Kingswinford; Dr. Taylor, Penrith; Dr. Winkfield, Shirley; Mr. Spurgin, Thrapstone; Mr. Evans, Ascot; Mr. Davies, Morriston; Mr. Box, Chirk; Mr. Lyddon, London; Mr. Hanbury, London; Mr. Rogers, Grinstead; Dr. Hilles, Cork; Mr. Akerman, London; Mr. Crouch, London; Royal Institution; L. X.; The Secretary of University College Hospital; Audax; L.R.C.P.E.; Studiosus; Z. X.; &c. &c.

Western Morning News, Portsmouth Times and Naval Gazette, and *North Middlesex Chronicle* have been received.

Medical Diary of the Week.

Monday, Feb. 2.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations on the Eye, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—2 P.M. General Monthly Meeting.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. Erasmus Wilson, "On Dermatology."
MEDICAL SOCIETY OF LONDON.—8½ P.M. Lettsomian Lectures: Dr. Broadbent, "On Syphilitic Affections of the Nervous System." Lecture III.: Syphilitic Affections of the Brain, Meninges, and Cerebral Arteries.

Tuesday, Feb. 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. Rutherford, "On Respiration."
PATHOLOGICAL SOCIETY OF LONDON.—8 P.M. The following Preparations will be exhibited:—Intra-ocular growth of uncertain character; Tumour which was attached to the Cervical Vertebræ; Dissecting Aneurism of the Aorta; Cancer of the Breast; Three Cases of Villous Tumour of the Rectum; Sarcomatous Growths from the Bladder and Vagina of a Child two years old; Specimens from a Case of Acute Leucocythæmia; &c. &c.

Wednesday, Feb. 4.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 3 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
CANCER HOSPITAL.—Operations, 3 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. Erasmus Wilson, "On Dermatology."
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Dr. Playfair, "On Puerperal Thrombosis." — Dr. Sabola, "On a New Operation for Atresia Uteri."—Dr. Steele, "On two Cases of Dystocia from Contracted Pelvis. — And other communications.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Anniversary.

Thursday, Feb. 5.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. P. M. Duncan, "On Palæontology, with reference to Extinct Animals and the Physical Geography of their Time."
HARVEIAN SOCIETY OF LONDON.—7½ P.M. Special Meeting of Council.—8 P.M. Mr. J. R. Lane, "On a Case of Dislocation of the Hip"; "On a Case of Fracture of the Humerus at the Anatomical Neck" (the patient will attend).—Mr. Julius Collins, "On a Case of Hirsute Growth covering both sides of the Thorax" (the patient will attend).—Mr. W. Towers Smith, "On a Case of Traumatic Pneumonia."

Friday, Feb. 6.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. Erasmus Wilson, "On Dermatology."
ROYAL INSTITUTION.—8 P.M. Weekly Evening Meeting.—9 P.M. Mr. Garrod, "On the Heart and the Sphygmograph."

Saturday, Feb. 7.

HOSPITAL FOR WOMEN Soho-square.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 9 A.M. and 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. G. Croom Robertson, "On Kant's Critical Philosophy."

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